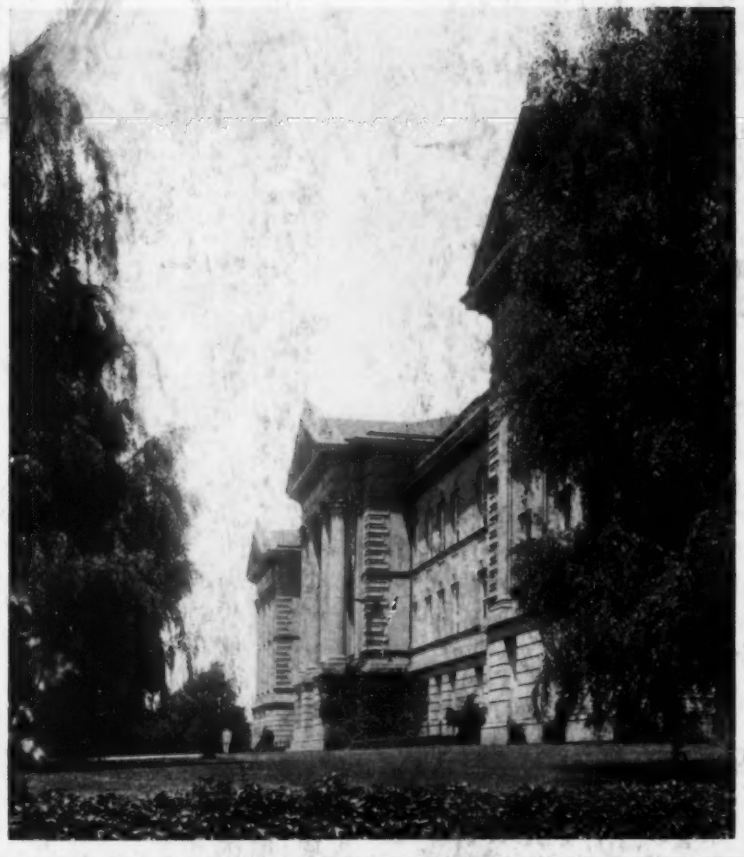
The NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

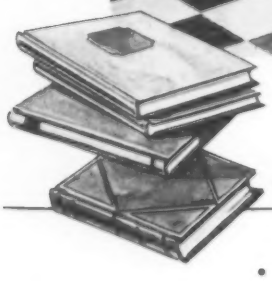


APRIL 1931

VOL. VII
No. 4

Published by THE NATION'S SCHOOLS PUBLISHING CO., *Chicago.*

It takes more than books to make a library!



No need for students to tiptoe gingerly about the library of Loyola College in Los Angeles. The floor of Armstrong's Marble Inlaid Linoleum is sound-quieting . . . even the most determined heels will not clatter on its resilient surface.

. . . *Loyola College in Los Angeles uses Armstrong Floors to create atmosphere of quiet dignity*

LIBRARIES must be more than mere store-houses for books. The surroundings must help study. Concentration must not be prevented by heels clattering over hard, unyielding floors. In this library the problem has been nicely solved by installing an Armstrong's Linoleum Floor.

The natural resiliency of Armstrong's Linoleum subdues noise and provides a pleasant, easy-to-walk-on floor. It is durable, too, and easily cleaned. The Accolac-Process (lacquer-sealed) surface is spot-proof, stain-proof. All dust and tracked-in dirt remain on the surface to be quickly brushed away. An occasional relacquering or waxing (do not lacquer over wax) is all the attention needed during years of service.

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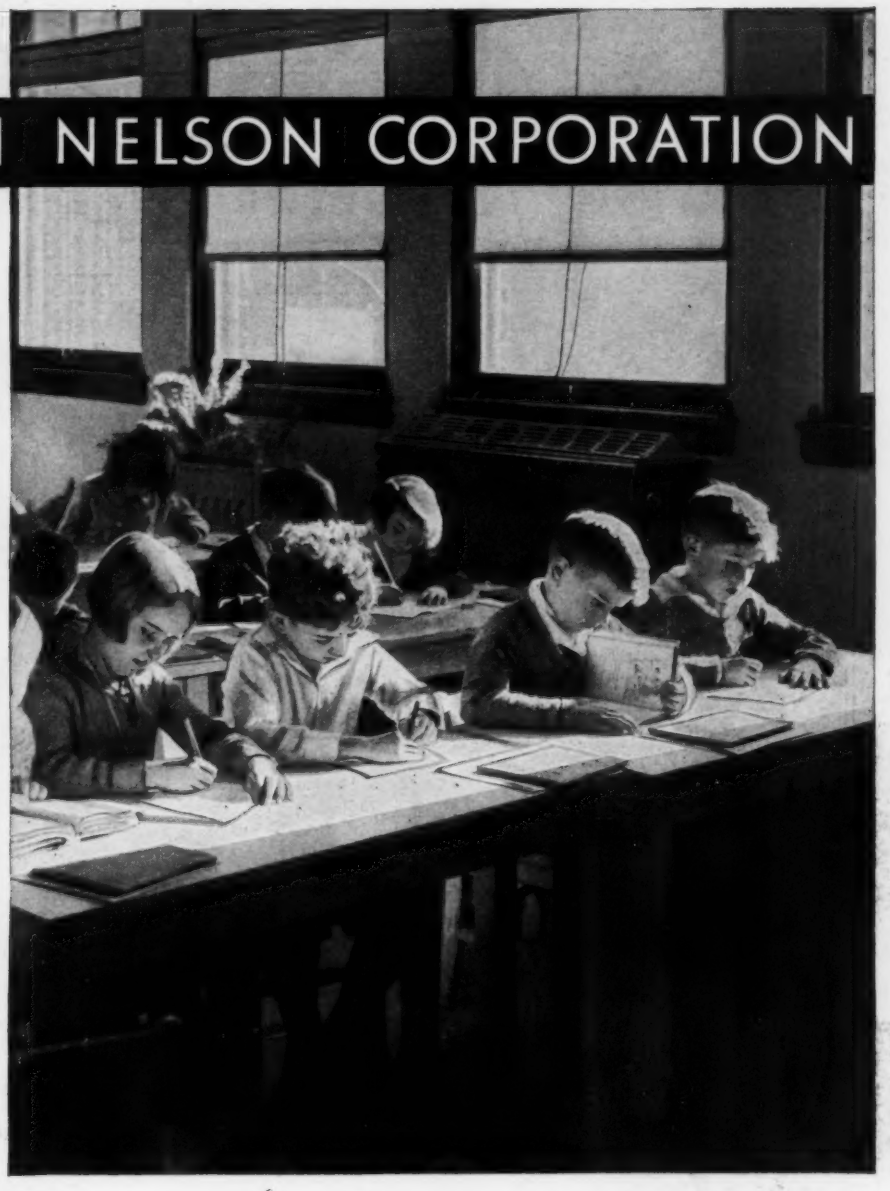

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Published on the fifteenth of each month by
THE NATION'S SCHOOLS PUBLISHING CO.
Member Audit Bureau of Circulations
President, Otho F. Ball *Secretary*, Stanley R. Clague *Treasurer*, J. G. Jarrett
919 NORTH MICHIGAN, CHICAGO—Telephone, Superior 6402
NEW YORK OFFICE—11 West 42nd Street. Telephone, Longacre 6591
SUBSCRIPTION RATES—Domestic, $2.00. Canada and Foreign, $2.50. Single copies (current), 25c. Back copies, 50c. Domestic rates include United States and possessions.
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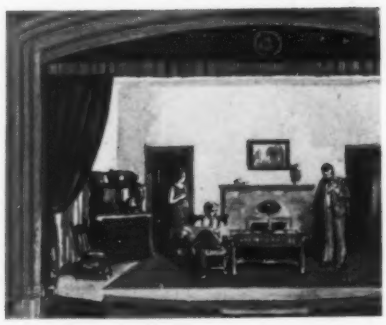

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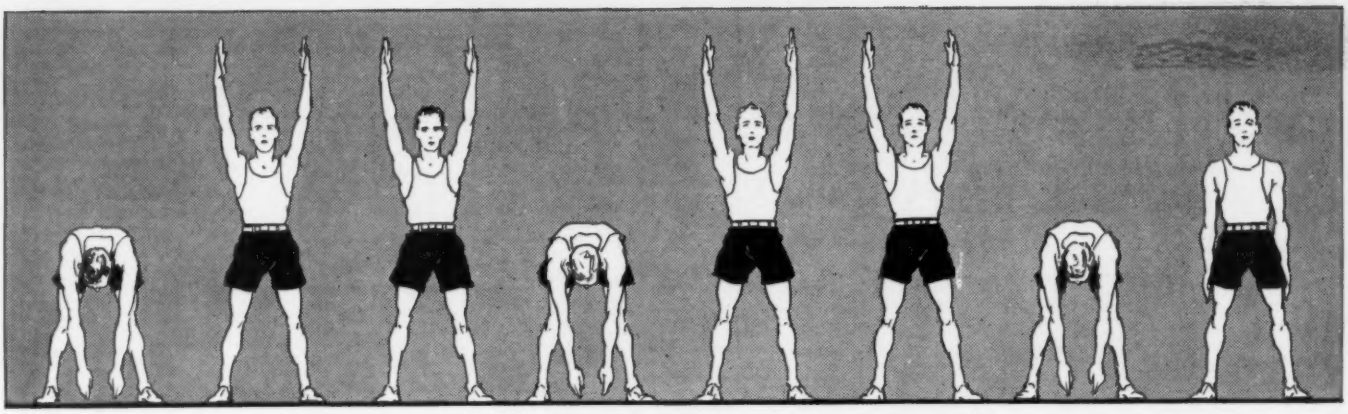

"... all out of step but Jim"
(AND 3 OTHERS)

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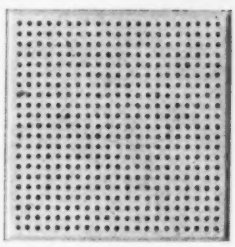

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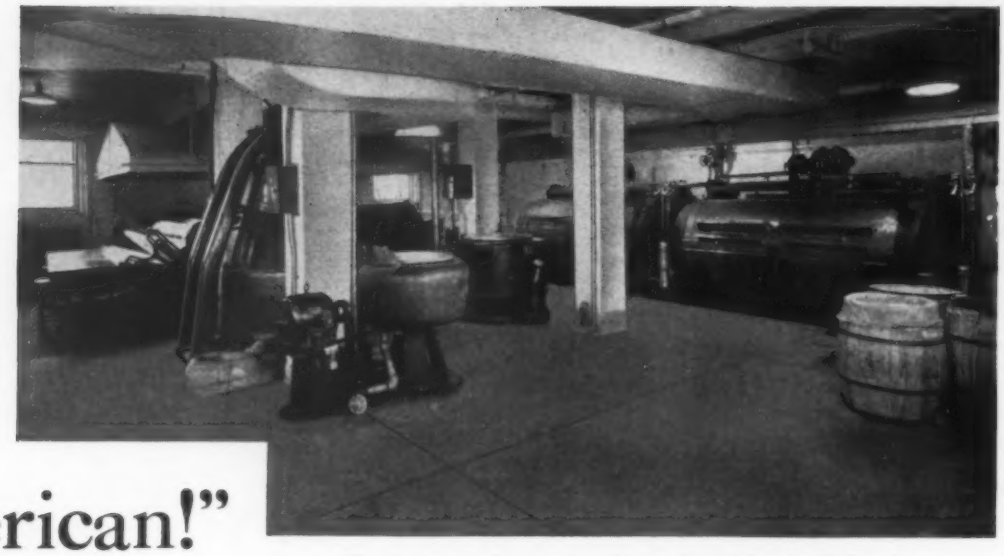

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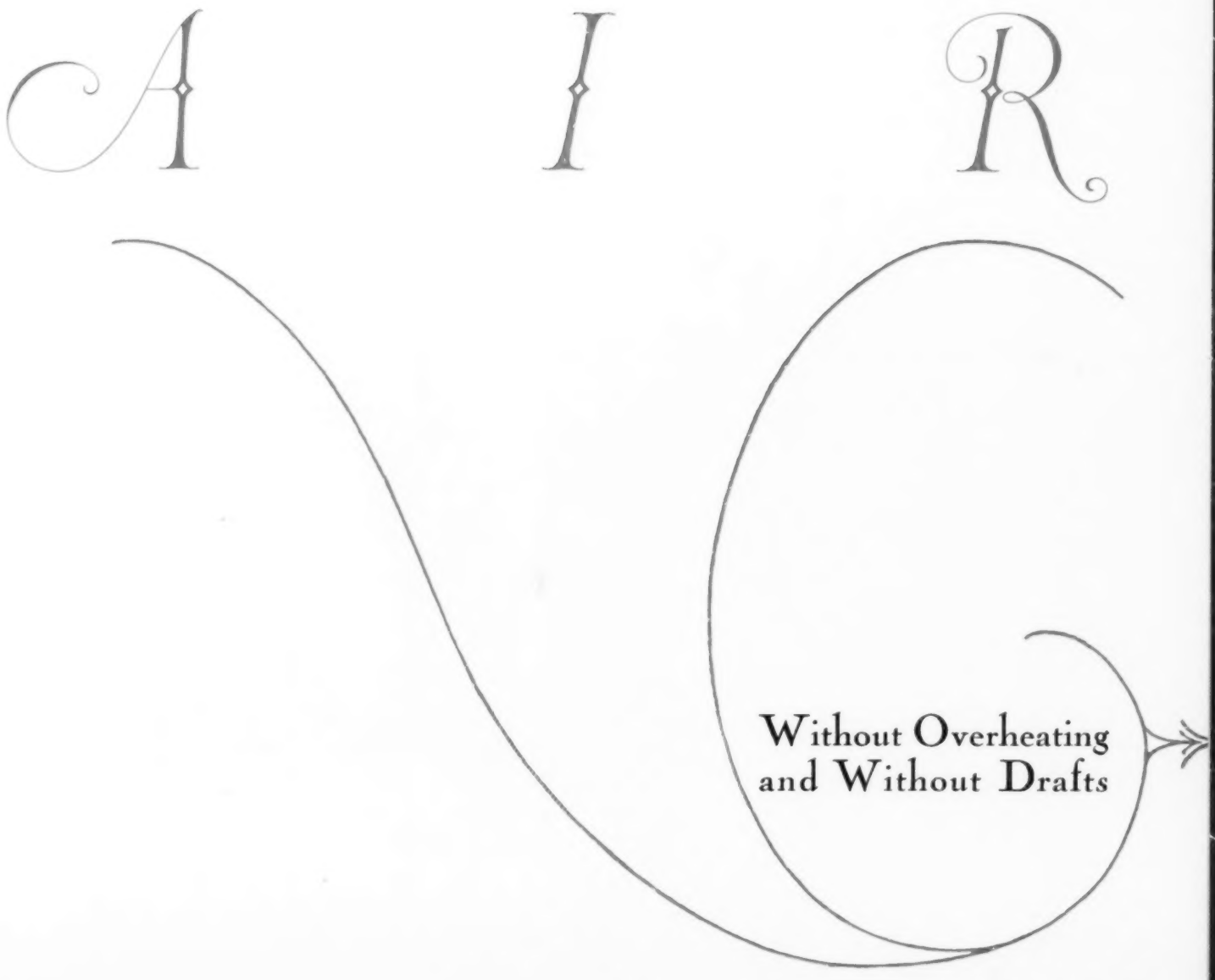

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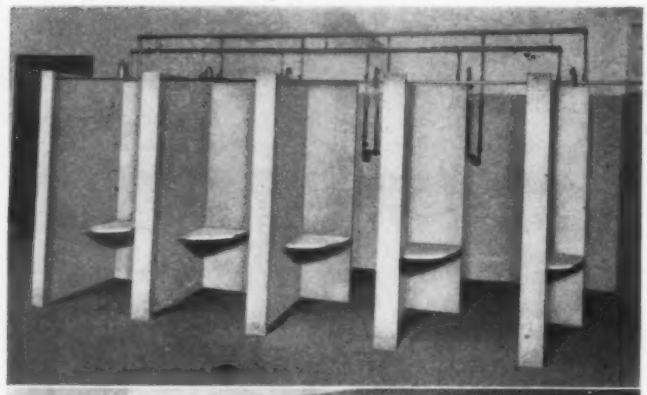

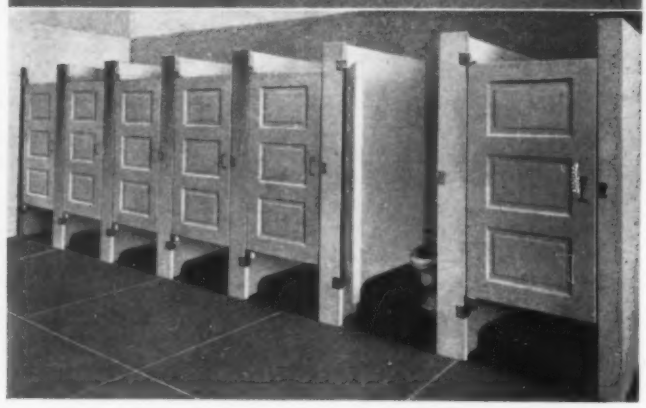

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Janitors

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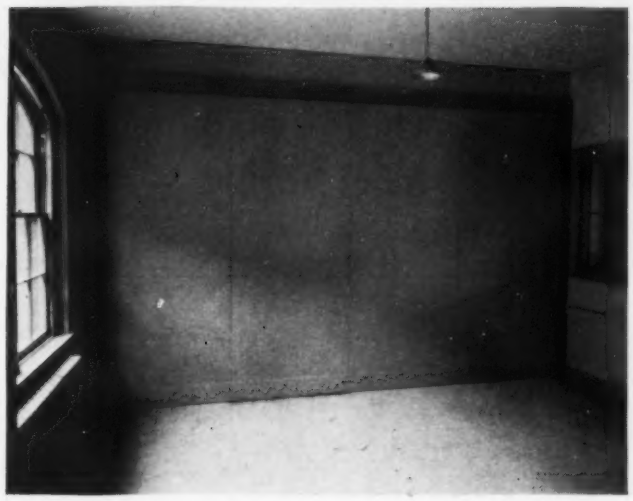

FAIRHURST Unit-Fold Partition installed in Passaic (N. J.) Y. W. C. A., Louis E. Jallade, Architect. This partition is made up of single door units.

This shows the same job with two partitions folded, throwing three small rooms into one.

SKILLFULLY AND PRACTICALLY DESIGNED

MECHANICALLY simple, staunch—Fairhurst Folding Partitions are not subject to the ills of the near-obsolete types of folding partitions because the *trouble making parts and devices are not present* in Fairhurst Folding Partitions.

Excessive settling of a building does not hinder in the slightest the smooth operation of a Fairhurst Partition because each door (or unit) rolls on the floor on a narrow track flush with the floor and is connected to the over-head guide in such a way that any variation in the height of the opening is *automatically* compensated for. Larger partitions than those shown here are available for gymnasiums and large assembly halls.

We also manufacture the Fairhurst School Wardrobe. Send for detailed information on both the Partitions and the Wardrobes.

Park, Winton & True Co., 101 Park Ave., New York
1855 *Factory: Addison, N. Y.* *1931*

In step with 1931 progress!

A school to be *modern, must be sanitary.* Dangers to health lurk in ordinary garbage and rubbish receptacles. Destruction of all waste by incineration is *modern* because it is sanitary, convenient, economical.

Particularly in schools where foods are served the Kernerator is a real necessity. Hopper doors, conveniently located on each floor, receive all waste—papers, sweepings, wilted flowers, garbage from cafeteria or lunchroom, sanitary napkins and other washroom debris — no storage, no transportation. The material drops down the flue to the incinerator chamber in the basement. There it is destroyed by burning. Non-combustibles—tins, bottles, crockery—are flame-sterilized and removed with the ashes. The air-dried waste furnishes the fuel for its own destruction —no cost for commercial fuel.

We shall be glad to send you the names of hundreds of schools throughout the country where the Kernerator is used.

Consult your architect and write for booklet, "The School Problem of Waste Disposal Solved."

KERNER INCINERATOR COMPANY

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Offices in over 150 cities

KERNERATOR REG. U.S. PAT. OFF. **INCINERATION**

Open all wardrobe doors *at once!*

Many convenience features of R-W school wardrobes:

SAVE FLOOR SPACE . . . You can get these new style R-W wardrobes complete for "built-in" construction or to fit existing needs. Doors open inward without taking floor space or interfering with wraps.

VENTILATION . . . Air currents pass under and through R-W Wardrobes carrying odors, dampness and germs from clothing.

HEATING . . . Wardrobes are heated by classroom radiators, eliminating need for additional heating units.

SAFETY . . . Clothing is safe from pilfering or disturbance because wardrobes are within the classroom.

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OPERATION . . . Special designing by R-W doorway engineers assures continued quiet, easy, trouble-free operation.

CONSTRUCTION . . . R-W Compound Key Veneered flush or panel doors may be obtained, guaranteed against warping, swelling or the effects of hard usage.

INSTALLATION . . . Responsibility for complete wardrobe installation is assured by Richards-Wilcox.

WRITE . . . Send for the catalog illustrating many types of wardrobes, and call upon an R-W doorway engineer at any time for a consultation upon your doorway problem.

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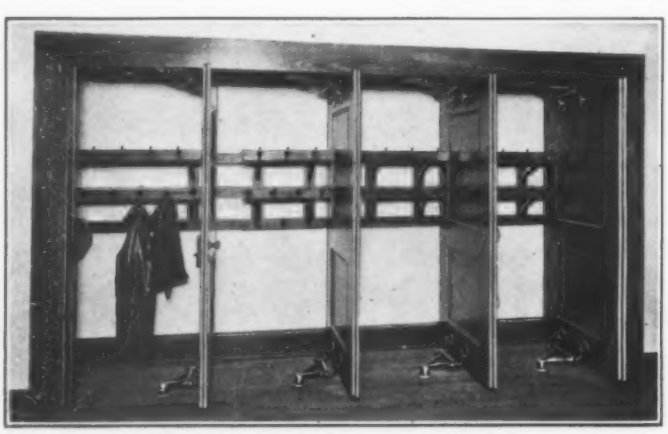

Illustrated above: Unit type wardrobe built in series for pupils and teacher to meet any requirement.

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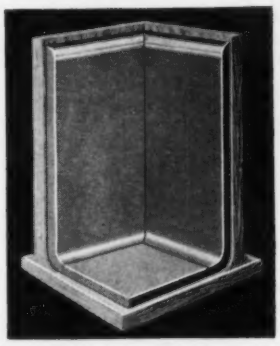

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In New Orleans, the most recent installation is in the Hutchinson Memorial Hospital, which is conducted in connection with the famous School of Medicine at Tulane University. A total of 70,000 square feet of Tile-Tex has been used to assure lasting quiet, foot-ease, and sanitation. Tile-Tex resists wear, fire and dampness — costs less for maintenance — and is fully guaranteed. Write today for our free book that gives all the facts and illustrates in natural colors the beauty of Tile-Tex designs.

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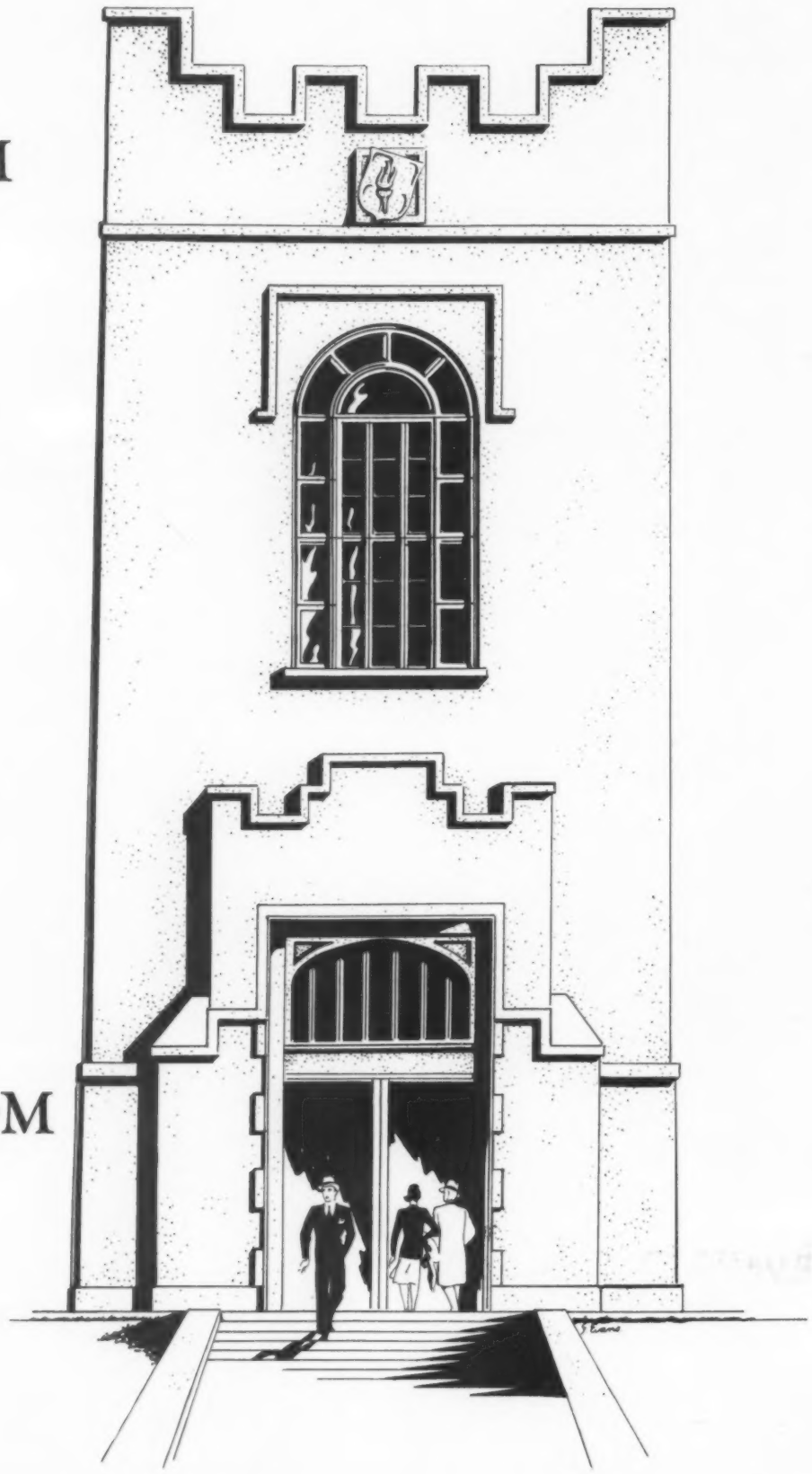

. . . From top to bottom, each and every bit of electrical equipment in a school may be Graybar supplied. Name *any* item . . . Lighting fixtures or footstep-saving Inter Phones . . . buzzers or wiring supplies . . . or the many-voiced Public Address System. Or anything else . . . If it's electrical, you've picked a Graybar item — and you've picked an item worthy of the finest school, an item backed by 62 years experience in things electrical.

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. . . No wonder then that you'll find so many of the finest schools in every part of the nation furnished from top to bottom with electrical supplies from America's oldest and largest distributor of everything electrical.

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the **HIT** of the N. E. A. Convention

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CANES

HUNDREDS of school superintendents and managers are today the pleased owners of a dandy Car-Na-Var Cane . . . our gift to them at the recent N. E. A. Convention at Detroit. Were you there? And did you witness our interesting demonstration of Car-Na-Var and Rubber-Var?

*Car-Na-Var is a scientific combination of varnish gum and waxes. It gives a beautiful, lustrous yet non-slippery finish to wood, linoleum, terrazzo, concrete and cork floors . . . protects the surface indefinitely from wear . . . and cuts maintenance costs as much as 50%. Comes in "natural" and popular colors. Applied with a mop . . . ready for traffic in an hour. The coupon below will bring full details.

**For rubber floors use Rubber-Var—companion treatment to Car-Na-Var.*

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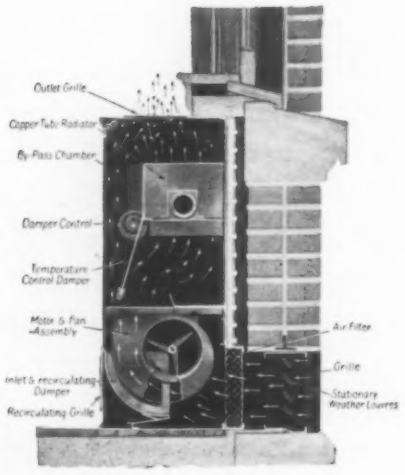

CHILDREN are naturally full of pep and energy. With their youth and vitality, it is hard enough for them to remain orderly and attentive under the best of conditions. When the air they breathe is hot and stuffy, when drafts or irregular temperatures prevail in the class-room or throughout the school building, school days become unhappy days. Teachers and children alike demand good heating and ventilating conditions to do their best.

Upon applying Universal Units, air conditions become as they should be in every room of the building. There is no overheating, no underheating. There are no dangerous drafts, no stuffiness. Universal Units, quietly and dependably, deliver a vertical discharge of air heated at just the required temperature. They provide a highly efficient method of supplying class-rooms with regularly-changed, clean and wholesome, heated air. They have been designed and constructed to meet every heating and ventilating requirement and to give years of reliable and economical service.

Your architect—who has applied Universal Units with complete satisfaction in the large school room and the small, in the new and in the old—will be pleased to tell you of years of experience with them. Or, the American Blower Branch Office near you will be glad to give you complete details.

Write for our book of prominent installations or for our catalog and engineer's data book. No obligation.

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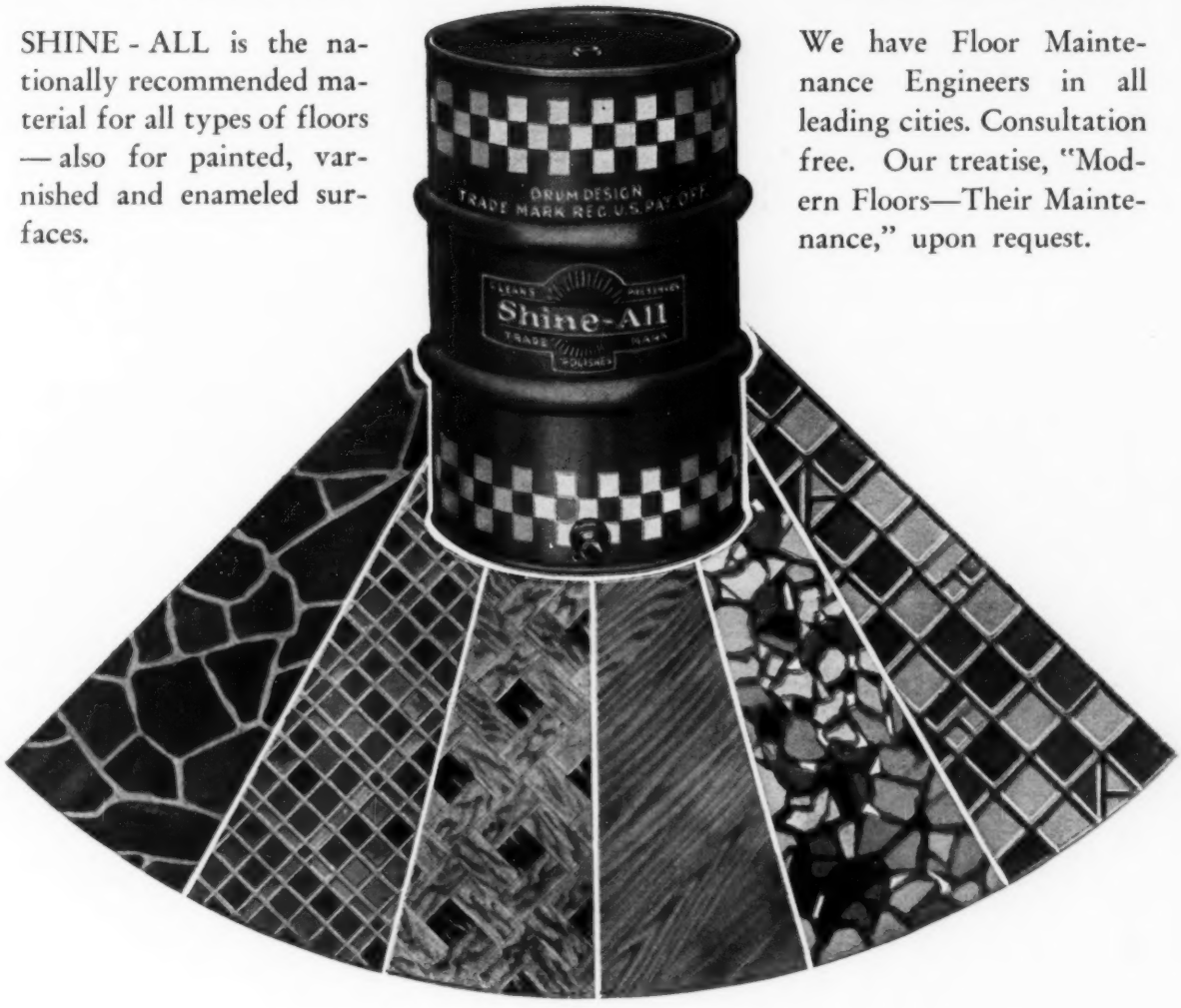

We have Floor Maintenance Engineers in all leading cities. Consultation free. Our treatise, "Modern Floors—Their Maintenance," upon request.

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—the one material that *cleans, polishes* and *preserves* in one operation.

—the *only* cleaner that eliminates rinsing.

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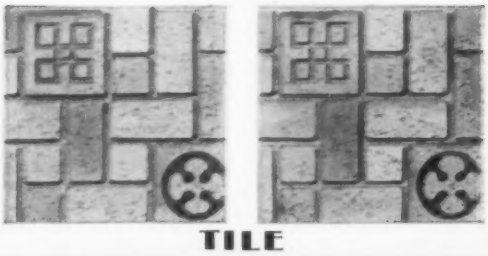

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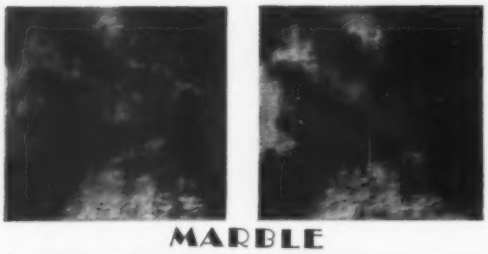
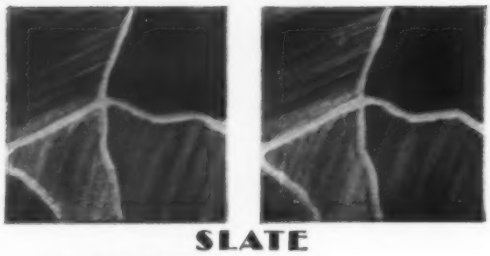


MARBLE



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ONE COAT SEALS

TWO COATS SEAL *and* POLISH

TWO COLORS

ONEX SEAL NATURAL
For light colored floors

ONEX SEAL AMBER
For darker floors

Onex Seal gives positive protection and an attractive finish to both inside and outside surfaces. Tests have proved Onex Seal capable of withstanding most severe weather and traffic conditions. Onex Seal is easily and inexpensively applied. Produces a waterproof, weatherproof, dirt resistant, sealed, polished surface. A permanent treatment. It penetrates and will not flake or crack.

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SPLINTERS ARE A MENACE

DON'T TOLERATE A SPLINTERED GYM FLOOR ANOTHER YEAR . . . ARRANGE NOW TO INSTALL BLOXONEND DURING THE SUMMER HOLIDAYS.

I. E. Young Junior High School, New Rochelle, N. Y. Gymnasium and exercise rooms floored with 8,300 square feet of Bloxonend. Shops floored with 4,700 square feet. Starrett & Van Vleck, Architects. Albert Leonard, Supt. Schools.

When you install a gymnasium floor of BLOXONEND you have the assurance that your students are forever immune from infection and disfigurement due to splinter wounds.

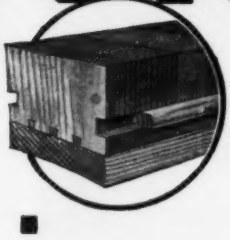
BLOXONEND is positively splinterless. The end-grain fibres form its surface. This surface is inherently non-slip, durable and astonishingly resilient.

Physical Directors and athletes state that the "feel" of a Bloxonend floor is remarkable. Just the proper degree of elasticity without sacrificing firmness. Nearly all of the finer type schools are installing Bloxonend in gymnasiums and shops. For detailed information write the Carter Bloxonend Flooring Co., Kansas City, Mo. Offices in Principal Cities—See Sweet's.

Senior High School, Fort Smith, Ark. Gymnasium floored with 4,040 square feet of Bloxonend. Perkins, Chatten & Hammond, Chicago, Architects. J. W. Ramsey, Supt. Schools.

Washington Junior High School, Pontiac, Mich. Gymnasium floored with 6,300 square feet of Bloxonend. Shops floored with 3,781 sq. ft. Malcomson & Higginbotham, Architects. James H. Harris, Superintendent of Schools.

BLOX-ON-END FLOORING



Bloxonend is made of selected Southern Pine with the end grain up. It comes in 8 feet lengths with the blocks dovetailed endwise onto baseboards.

Lays Smooth
Stays Smooth

1 OUT OF EVERY 51

Ohio State Schools Is G&G Equipped

There are 10,541 colleges, high schools, grade schools and private schools in Ohio. 205 of these schools are using G&G Telescopic Hoist equipment for the removal of ashes, rubbish and garbage. Eliminating the small schools that have no reasonable use for this equipment, the practice of removing ashes, rubbish and garbage the G&G way in the larger schools would show a much higher ratio than 1 out of 51.

The use of G&G Telescopic Hoist equipment in thousands of schools, hospitals, churches and other buildings throughout the country constitutes a popular indorsement of its economical operation, long life and positive safety features.

Write for illustrated catalog.

GILLIS & GEOGHEGAN

65 Years of Service

523 West Broadway New York

The G&G ELECTRIC REG. U.S. PAT. OFF.

Telescopic Hoist

With Automatic Stop and Gravity Lowering Device

You Can't Blame Him

HE doesn't mean to litter the washroom—to be wasteful. But ordinary paper towels are so flimsy, so easily torn it takes several to dry his hands quickly.

Put Bay West Mosinee Singltowls in your washroom and note the difference!

Strong—yet kind to tender skins. So absorbent that one towel dries a pair of little hands completely—and in a jiffy.

Let us arrange for a free test in your own washroom. Write for details.

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Green Bay, Wis.

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MOSINEE KRAFT TOWELS

Sermonettes on SEATING

NO. 2

Deliberations on merits as applied to seating, should not permit price to wear a halo. The reliable guide is a recollection of how time and usage have vindicated quality selections.

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Movable Desks • Tablet Arm Chairs • Teachers Chairs • Typewriter Chairs
Folding Chairs • Kindergarten Chairs • Sewing Room Chairs • Steel Stools

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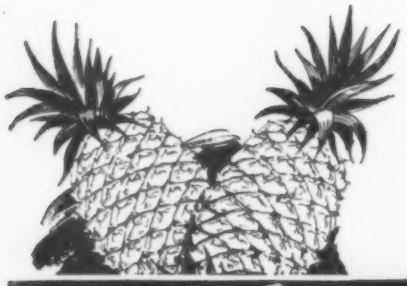


Healthful, inexpensive lunches... with Libby's Pineapple

Pineapple Supreme Libby
(above)

Chill and drain Libby's Pineapple Tidbits. Place in fruit cocktail glasses. Pour over chilled custard sauce, flavored with vanilla.

Crushed Pineapple Luxor
(left)

Crumb loaf of stale bread. Mix in ½ cup sugar, ¼ cup butter, and grated lemon rind. Fill buttered dish with layers of crumb mixture and Libby's Crushed Pineapple. Pour lemon juice over. Dot with butter. Bake in slow oven, ½ hour. Serves eight.

Now the new crop from Libby's Hawaiian plantations ... the finest ever grown!

Its soothing, purifying effects make pineapple extremely valuable in every diet!

And as a rich source of mineral salts, fruit sugar, the A, B and C vitamins—it offers just the health-building qualities that growing children, that your students of all ages, need.

Now Libby brings you the finest pineapple ever grown—the new crop, which we've taken 20 years to develop on our own plantations!

Actually a new pineapple delicacy, here is superb fruit with all the healthful properties and a new, richer flavor.

It's been matured right on the plant. Then cut and packed at the moment of perfect ripeness.

Libby's new Pineapple is distinctly economical too, in everyday use.

Serve it frequently in salads, cakes, with meats, or in the tempting ways shown here.

Order Libby's Hawaiian Pineapple today. Three styles—Sliced, Crushed, Tidbits. Six convenient size cans offering you a wide choice.

Also, be sure to send for a *free* set of Libby's special recipe cards—by that famous authority, Mary Hale Martin!

Libby, McNeill & Libby — Chicago

Mail the coupon NOW

Address: Libby, McNeill & Libby
Dept. NS-3, Welfare Bldg., Chicago
Please send me a FREE set of Libby's special recipe cards, by Mary Hale Martin.

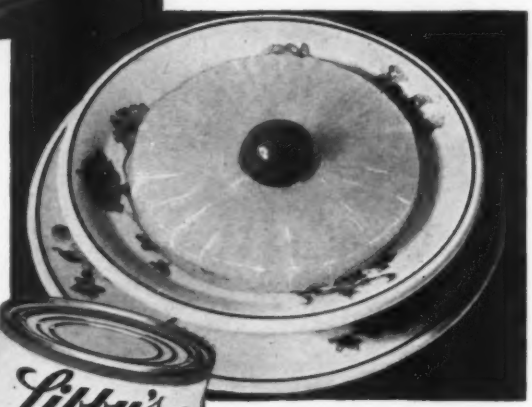
Name .....

Address .....

City ..... *State* .....

Libby's
Pineapple Natural
(right)

Serve Libby's Sliced Pineapple plain, just as it comes from the can, in its own rich juice. A favorite dessert with the children and grown-ups too.



Sliced Pineapple Esperance
(below)

For each 2 slices of Libby's Pineapple, one cup whipped cream, mixed with teaspoonful powdered sugar. Garnish Pineapple with whipped cream mounds. Dot with mint jelly. Serve cold.

The
NATION'S SCHOOLS
DEVOTED TO THE APPLICATION OF RESEARCH TO
THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

VOLUME VII APRIL, 1931 NUMBER 4

Making a Scientific School Plant Survey

Practical suggestions that will aid those planning building programs to spend school funds wisely are here presented, and the best types of surveys analyzed

By T. C. HOLY, Bureau of Educational Research, Ohio State University

ACCORDING to a study of city school surveys recently made by D. H. Caswell, the school survey had its inception in Rhode Island where the general assembly in 1843 authorized the employment of a suitable person to "visit and examine the representative public schools of the state, and to make a report to the legislature with such observations and reflexions as experience may suggest upon the condition and efficiency of our system of popular education, and the most practicable means of improving the same." Henry Barnard was appointed to this task, and among the phases of the educational program touched on in his report was that of schoolhouses of which more than two hundred were visited.

From that time, however, until about 1910, little was done in the way of school surveys. During that year the commissioner of education, C. N. Kendall, of New Jersey, made a report on the Boise, Idaho, schools covering the following five phases of the problem: school buildings, teachers, course of study, organization of schools and the attitude of the community.

From Caswell's study it is found that 181 city school surveys were made and printed during the period from 1910 to 1927. An analysis of these indicates that fifty-six were building or plant surveys only, and 108 of the remaining 125 included buildings as a part of the survey. So, in only seventeen of the 181 surveys was no consideration given to the problem of school buildings.

Because of the emphasis that has been placed on school plants in these surveys, it seems desirable to review briefly the development of this phase of the survey. One of the earliest of these within the scope of the present meaning of the term was that of Salt Lake City, Utah, made under the direction of Elwood P. Cubberley in 1915. A chapter in Cubberley's report, devoted to the school plant, gives a detailed analysis of the types of buildings and of locations with reference to railroads, factories, etc., together with a summary and recommendations.

Surveys of Two Kinds

Since that time, a great many surveys in communities ranging in size from the largest in the county down to relatively small towns have been made, a large proportion of which have not been printed. In general, they have been of two kinds so far as the personnel and organization of the survey staff have been concerned: (1) those in which a group of survey specialists are called in from the outside for the purpose of directing the survey and (2) those in which the survey is developed by persons within the system.

STATE OF OHIO
DEPARTMENT OF EDUCATION

COPY

Date July 8, 1929

To Board of Education,

Huntington Rural School District,

Ross County.

According to the provisions of the appropriation bill for educational equalization, a portion of this fund may be used for new buildings, additions, repairs and equipment in the state aid districts.

A new building consisting of eight classrooms, study hall, auditorium-gymnasium to accomodate from 250 to 275 grade and high school pupils, to be located near the present high school building. Of the sixteen one-room schools in the district of Greenbrier, Newingburg, Baptist, Mt. Tabor, Rozelle Creek, Hartwood, Pleasant Valley and Echodale could be immediately brought to this center. The two room portable building now used for a second grade high school could be used for either vocational work or grade school purposes. This project will reduce the number of teachers needed by three thereby effecting an annual saving of from $1200 to $1500 a year.

Fig. 1. Rehabilitation form sent board of education proposing new school building.

Estimated Cost $55,000 to $60,000 including site and equipment.

The amount and conditions under which your district can participate in this appropriation are as follows:

That this district receive $7,500 in 1929 and $7,500 in 1930 from the state rehabilitation fund to be applied on acquiring a site, erecting and equipping the building outlined above under the following conditions:

1. That the district at the November 1929 election vote bonds necessary to provide the additional funds to acquire the site, erect and completely equip this building.

2. That the eight one-room schools listed above be closed, pupils assigned to this center. The buildings sold and the funds obtained therefrom applied on the cost of this construction and that as rapidly as road conditions permit other one-room schools in the district be closed and disposed of in this same manner.

3. That the location, plans and equipment be approved by the State Department of Education.

Action must be taken by the Board accepting or rejecting this proposal within ten days of the date mailed from this office, and one copy returned to the State Department of Education at once.

Approved Yes (signed) J. L. Clifton
Director of Education.

Not Approved

State Board of Control,

Per (signed) Harry D. Silver

Date August 5, 1929

The Board of Education of Huntington Rural District, Ross County,

by formal action {Accepts / ~~Rejects~~} this proposal and conditions outlined therein.

If accepted, they *agree* to cooperate in the fullest extent with the State Department of Education in carrying out this proposal.

(signed) W. H. Cooper
Clerk of Board.

Date August 10, 1929

(The action of the Board of Education in either accepting or rejecting the proposal must be made a part of its minutes.)

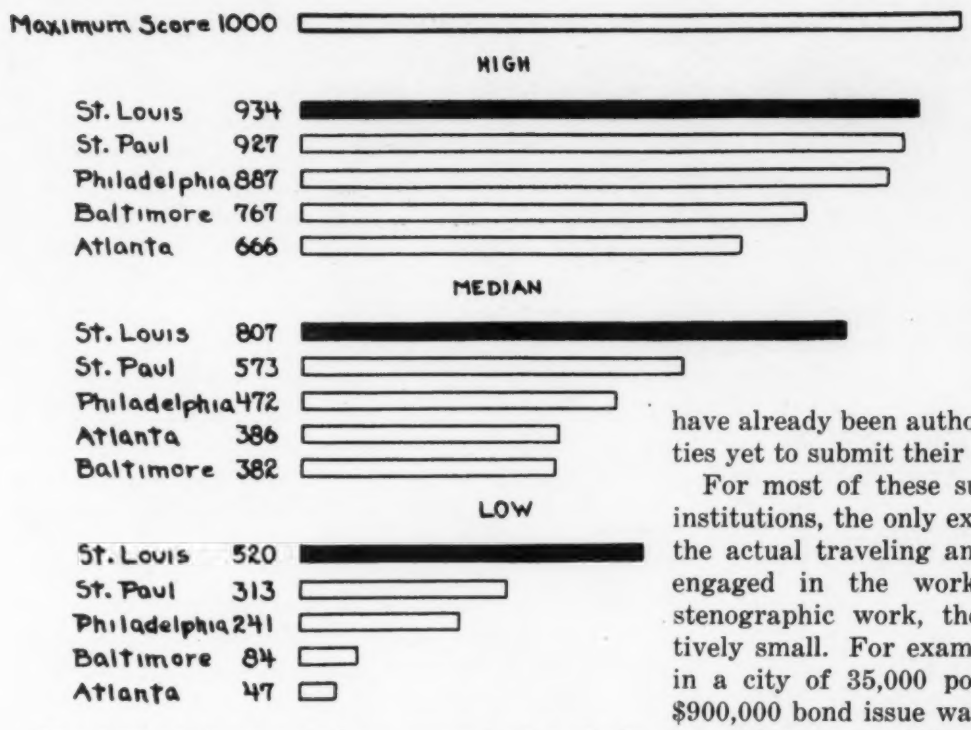


Fig. 2. Comparison of high, median and low scores on elementary school buildings in St. Louis, St. Paul, Philadelphia, Baltimore and Atlanta.

The first of these may be a survey of a single city or community, a county survey or an entire state. The survey staff in this first type falls into three general classifications as follows: (1) those coming from outside the state, (2) those connected with the state university and (3) those connected with the state department of education.

Typical of the first group are the Salt Lake City survey which has already been mentioned, the St. Louis survey of 1917, the Omaha, St. Paul, Atlanta, Baltimore, and Philadelphia city surveys, the Logan County, Ohio, survey, and the Texas, Virginia and West Virginia state surveys.

As examples of surveys carried on by personnel within the system, those in Denver, Detroit, Chicago, St. Louis, Kansas City, Cincinnati, Indianapolis, Minneapolis and Des Moines may be cited, none of which has been published.

It seems desirable here to discuss briefly these two common types of approach. For the small city or community whose building activities are limited, the first type unquestionably is the only feasible one, since the system cannot afford to retain the services of a special staff or even of one person devoting his time to this problem. Also, many of the state schools now maintain bureaus of educational service, whose function is to make surveys where such services are requested. For example, the state universities of Kansas, Missouri, Minnesota, California, Iowa, Nebraska and Ohio provide such services. The bureau at Ohio State University, during the past two and one-half years, has made school plant surveys in fourteen communities having a total estimated population of 257,000. Bonds to the amount of $4,224,000 have already been authorized, with four communities yet to submit their issues.

For most of these surveys conducted by state institutions, the only expense to the community is the actual traveling and living expense of those engaged in the work, clerical, drafting and stenographic work, the total of which is relatively small. For example, in one of our surveys in a city of 35,000 population, and in which a $900,000 bond issue was carried, the total cost to the district was $259.12.

So long as the services of such bureaus are available—bureaus in charge of specialists motivated only by the desire to render educational service—no small community can defend the expenditure necessary to maintain within the system persons trained in the technique of this specialized job. The staff for a single community survey usually comes either from outside the state or from the state university. In those cases where state departments of education are staffed to do survey work, their activities usually cover larger areas, such as counties or even larger sections of the state, although they may make community surveys. For example, the state departments of Alabama and Louisiana have each recently issued a school plant survey covering an entire county.

The advantages of this plan over either of the others is that it covers a much larger area and must therefore take into account the relationships that one school community bears to another, and also that the recommendations are in terms of the larger area. The fact that the survey recommendations represent the judgment of the state department, as the head of the state school system, adds considerable weight to the findings.

The use of this plan, wherein the work is done by a staff from the state department of education, can best be explained by briefly outlining its operation in Ohio during the past year. At the present time between 600 and 700 of the 2,100 school districts in the state receive more or less state aid in the operation of their schools. Prior to last year no state aid funds were expected to be used for capital outlay purposes. The state department,

however, was convinced that many of these poorer districts were unable to finance their capital outlay expenditures, so mainly through the efforts of Dr. J. L. Clifton, state director of education, the last legislature appropriated an additional $1,000,000 for each year of the biennium to be used for plant rehabilitation—new buildings, additions, repairs and equipment.

Since the only restriction on the distribution of this fund was that it should be approved by the state board of control, it was necessary to conduct surveys to ascertain the most effective meanings of distribution. These surveys I directed during the spring and summer of 1929. With the assistance of G. M. Morris and E. O. Braught of the state department staff, county plant programs were set up in thirty-one of the counties in which most of the state aid territory is located.

In general, the procedure was as follows:

1. Blanks asking for detailed information on each building—kind, size, age, cost, enrollment, distance from surfaced road, number of pupils transported and other facts—were sent to the county superintendent before the county was visited.

2. County superintendents were asked to prepare three county maps showing the following: (1) the present school district lines, the location of school buildings and the present road system; (2) the type of present roads and the projected five-year road program as laid out by the county engineer; (3) the permanent school centers and boundary lines, schools that should be eliminated, together with the centers to which they should go.

3. With this material, the survey staff spent from two to three days in each county, seeing the buildings and road conditions, interviewing boards of education and studying in general the county building needs.

4. Before the staff left the county, the projects that should be undertaken in carrying out the program were arranged in order of their need and importance. Just what territory each project should cover, the kind and size of improvements needed and schools that would be eliminated by the project were carefully noted.

5. Following the visit of the staff to the county, letters were sent by the director indicating the changes that should be made as a condition for participation in the regular equalization fund. This is in accordance with the Ohio law that says: "For this purpose, that is, participation in state equalization fund, the director shall have power to order any local boards of education or any county boards of education to exercise any power of whatever character in them vested by law, and such order shall be complied with forthwith as a condition precedent to any participation in such fund." Ap-

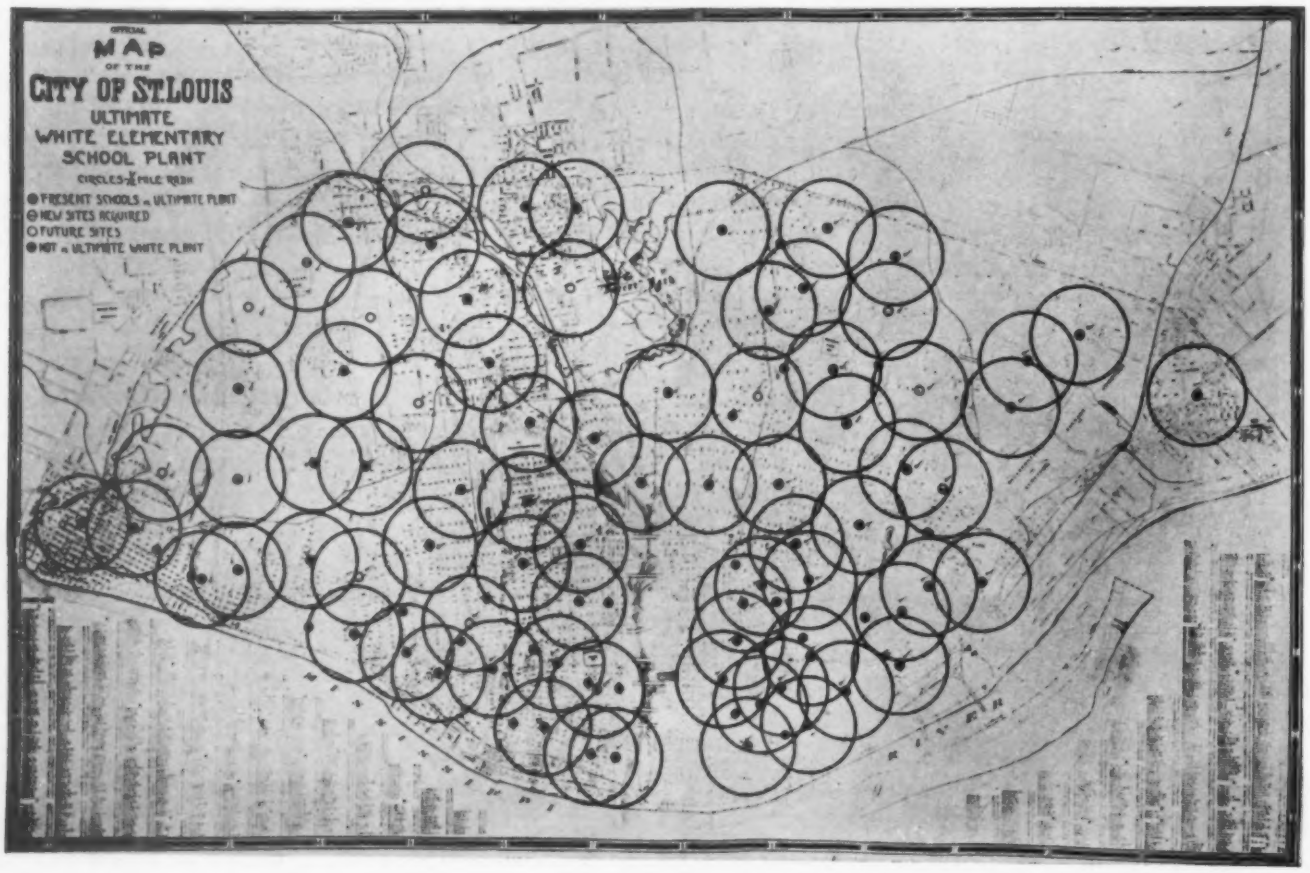


Fig. 3.

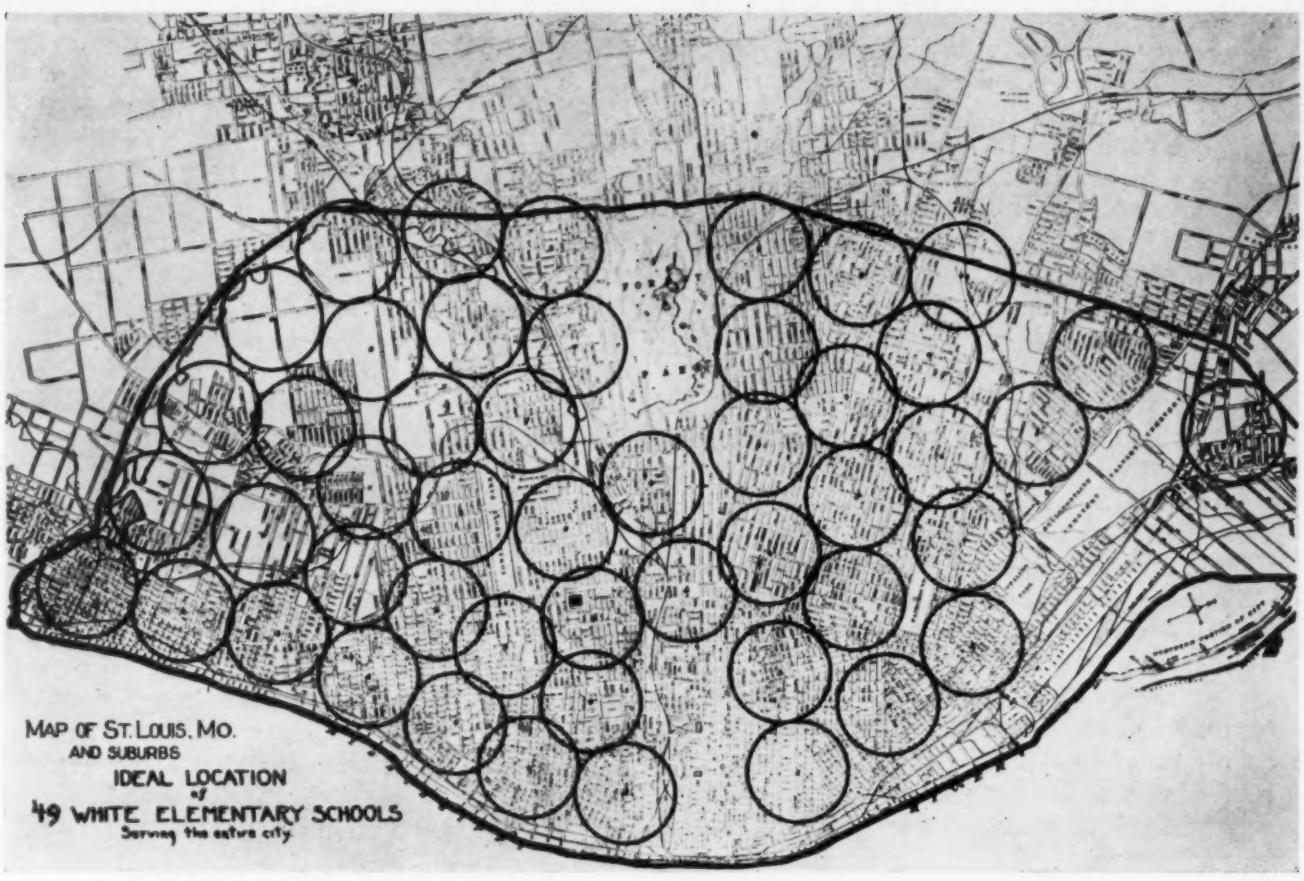


Fig. 4.

proximately 200 one-room schools were closed last September on the basis of this provision.

6. In those cases where new buildings or additions were needed, according to the survey, definite building proposals were set up for each district, stating the improvements needed and their approximate cost, the financial condition of the district, the changes in school district boundaries needed, and the amount of money allowed the district from the rehabilitation fund together with the conditions that must be met in order to receive this money. The most common of these conditions was the creation of larger school districts, elimination of one-room schools and the voting of a bond issue. These proposals after being signed by the director of education were submitted to the state board of control. If approved by it (it should be said that of 209 proposals prepared, all were approved by this board), they were sent to the local board for their acceptance or rejection.

7. On this basis of these proposals, sixty-nine bond issues were submitted at the November election, forty-one of which carried. These projects will make possible the ultimate elimination of about 200 more one-room schools.

8. Since one of the provisions of each proposal was that the location, plans and equipment of the building must be approved by the state department, considerable time has been spent on those items since the election.

As an illustration of the form of these proposals there is included in Fig. 1 a copy of that made to the Huntington Township, Ross County, Board of Education, which was accepted by the board under date of August 10, 1929. A bond issue was carried at the November, 1929, election and a building is now under construction which when it is completed will eliminate sixteen one-room schools, all old and in poor condition.

This in substance is the operation of this plan of school survey in Ohio during 1929. As a means of eliminating small expensive and unsatisfactory schools, enlarging school units, welding the county schools into a unit and stimulating the patrons to do their part in providing better school facilities, the results of this plan have been most gratifying.

With the trend toward centralization, it appears that this plan of school plant survey will become much more common.

For the city whose size is sufficiently large to require a continuous building program, the second type of survey has certain advantages, and, on the whole, seems more desirable. In a survey of a city of this size a large amount of data on various phases are collected. A careful analysis is made of the present plant in order to ascertain the de-

gree to which it can be utilized in the ultimate plant. This involves an evaluation of each building in terms of some standardized score card with occasional comparisons of building scores with other communities. In Fig. 2, for example, is shown a comparison of the high, median and low scores on the elementary school buildings of St. Louis, St. Paul, Philadelphia, Baltimore and Atlanta, all of which had been evaluated by means of the Strayer-Engelhardt score card for elementary school buildings.

One of the most important considerations in such a survey is the ultimate plant that must be determined on the basis of the existing conditions together with the best ultimates on what is likely to occur. Because of poor location, buildings too small and too close together, and changing economic and social conditions, it is often necessary to eliminate many of the present buildings from the ultimate plant. In Fig. 3 is shown the ultimate, white, elementary school plant for St. Louis where I made a school building survey in 1924 and 1925. It will be noted from this figure that twenty-two of the white elementary buildings in use at that time are not included in the ultimate plant while a number of new sites are recommended. The recommended ultimate plant, including present buildings, new sites acquired and future sites, consists of seventy-nine buildings. It will be further noted that even in the ultimate plant there is much overlapping due to many conditions that must be considered.

As a contrast to what might be done if present buildings could be ignored, Fig. 4 was prepared showing how forty-nine buildings could adequately serve the entire city instead of the seventy-nine shown in Fig. 3. This, of course, only illustrates the changes necessary to utilize the existing buildings.

Watching Changing Conditions

As has already been stated, the ultimate plant shown in Fig. 3 was based on conditions at the time the survey was made, plus the most reliable future estimates of both economic and population forecasts. Since, however, a large city is continually changing, growing in directions not anticipated and being retarded in certain sections, such developments as changing in zoning classifications, opening new thoroughfares and extending boundaries, cannot be invariably anticipated by the most expert technicians. The Bell Telephone Company, which probably has the most effective organization in the country for forecasting population, recognizes that unforeseen changes may entirely alter its plan. In response to an inquiry on the company's procedure, a general manager writes that the company not only prepares careful studies of population developments, but, whenever additional facilities must be provided, the situation is carefully reviewed and the original estimates revised accordingly.

The need for carefully watching changes in conditions that were not anticipated is perhaps best illustrated by a concrete example. In connection with the school building survey for St. Louis, there was one area which, according to the zoning ordinance, was first classified as residential. The area was well adapted for residential purposes, and it seemed evident that that would be the nature of the development. Within a period of two months, however, the entire situation was changed. The General Electric Company purchased a tract of 155 acres in this area for the purpose of erecting a plant which, according to their plans, would within a ten-year period employ 25,000 men. Immediately the zoning was changed to industrial, and the whole character of that area was changed. In the survey report a five-acre site for an elementary school had been selected just across the street from this 155-acre tract, but with this unexpected change, it was necessary to recast the entire program for that section of the city.

How to Get Best Value From a Survey

In the second place, the success of any survey is measured in terms of end results. The most carefully prepared plant survey becomes worthless unless it actually functions in the building program of the school system. It seems reasonable to assume that the most effective functioning will be obtained by holding those who make the survey directly responsible for carrying out its provisions or by keeping them in close contact with those persons who are to be held responsible.

If the machinery for carrying on the survey of building needs is a part of the regular organization, the personnel of the staff in charge are always available to check carefully each recommendation before it goes into effect and to outline building activities year by year. In surveys of the first type, this checking must be done, if at all, by those who are not thoroughly familiar with the technique which should be employed. As an illustration of what too frequently happens to the work of outside specialists, the following case is cited: In 1919 several competent engineers were engaged to make a commercial survey of the city of St. Louis. This they did carefully, submitting a 400-page report. Seven years thereafter the report was still filed, chiefly because the staff who had accumulated the data and made the recommendations was not there to interpret and carry them out.

A clear and concise statement of the major prob-

lems to be considered in a scientific school plant survey is here quoted from Dean Paul C. Packer, University of Iowa, formerly assistant superintendent of schools of Detroit, in which capacity he had a large part in developing an $18,000,000 school plant survey for Detroit:

"In the consideration of any school building program, there are at least six outstanding factors that must be carefully considered. The first of these is the character of the city, which determines the type and extent to which educational opportunities are likely to be offered. The second problem relates to the policy of organization which has to do with such matters as whether or not the first twelve years of education are to be broken up into a 6-3-3, 6-4-2 or one of many other organization schemes and is the essential basis of any concrete planning. The third factor is the determination of the ultimate plant, which is based upon the policy of organization adopted. Fourth, it is necessary to study the proposed ultimate plant, which has to do with determining each year's progress, leading to the carrying out of the whole objective. The fifth consideration concerns the determination of the method of financing the program. Sixth, it is necessary to sell this program in an effective way to the public or to the appropriating bodies."

Frequent inquiries are made of the value of school plant surveys, if any. Only recently a board member made the statement that there was no particular advantage in having a school plant survey unless the persons who made it could accurately forecast what the future would bring. The reply was made that it is far better to base judgments on such facts as are available, rather than proceeding on opinion and chance.

The Need to Spend Wisely

In the case of schools it seems even more essential that they carefully analyze the situation, since they are expending public funds. In Ohio, for example, in 1928, 150 bond issues were submitted to the voters, of which ninety-eight, amounting to approximately $25,000,000, carried. In 1927, 179 issues were submitted, of which 113, amounting to slightly more than $10,000,000, carried. In other words, in a single state for a two-year period, more than $35,000,000 was authorized for school buildings. In the expenditure of such a large amount of money, certainly every precaution should be taken to see that it is expended on a basis of need.

With the emphasis that is being placed on scientific procedure in the whole field of education, it seems obvious that the school plant survey will occupy an increasingly important part in the determination of adequate yet economical housing facilities for the boys and girls of this country.

Why Caution Is Necessary in the Use of Intelligence Tests

Joy Elmer Morgan, editor of the *Journal of the National Education Association*, issues the warning that "Objection is sometimes voiced to the extension of the compulsory attendance age and enrichment of the curriculum on the ground that many children cannot profit by instruction beyond the fifth or sixth grade because of low intelligence. It is even claimed that the attempt to give these children further education is a waste of money and that they would be better off out of school and at work. This theory is based on the ratings of children as measured by the so-called intelligence tests which show in a general way that children leaving school for work tend to be in the group of lower I.Q.'s.

"To begin with, there are no intelligence tests. I do not know of a single psychologist in America or abroad who believes that existing tests measure intelligence. They do have their values and their uses, but it is a mistake to use such tests to limit the educational or social opportunities of the masses on the theory that they were incapable of rising to a larger life. But step by step opportunities have been widened and people have risen. We should be slow about closing the doors of opportunity. We can afford to make the error on the other side."

Mr. Morgan's statement suggests the need of finding a better method of gauging ability.

Ten Years of Achievements in Education

Figures published in the *American Schoolmaster* show vividly the progress that education has made in this country within the last ten years. Because there is nothing so effective as figures to prove a point, they are published here:

Ten Years Ago		*To-day*
$635	Average Salary of Teachers	$1,300
High school	Average Certification Requirements	Two-year normal
40,000	Summer School Attendance	250,000
25	Teachers' Colleges	100
330,689	College and University Enrollment	664,266
1,600,000	High School Enrollment	4,000,000
$750,000,000	Expenditures for Public School Education	$2,000,000,000
5	State Tenure Laws	14
5	State Retirement Laws	22
10,000	Members of the N. E. A.	193,000
200,000	Members in State Education Association	650,000

A School That Offers the Best in Physical Care

Regular hours, carefully planned meals and expert mental and physical supervision combine to make health standards unusually high at Cranbrook School

By SUSA P. MOORE, Chicago

A MEDICAL department, headed by a modern progressive physician, with a small but completely equipped infirmary, is not to be found in every private school, for conservatism too often lays a restraining hand on the organization and direction of such a department. But Cranbrook School, Bloomfield Hills, Detroit, represents today's best practice in the physical care of its schoolboys. The system in operation here is both unique and practical.

Cranbrook School operates on a $12,000,000 foundation established by George G. Booth, owner of the *Detroit News* and seven other newspapers. As the school thus represents the ideas of a newspaper man, it is not surprising that traditional building plans as well as certain antiquated scholastic ideas have been abandoned and that the school represents the most modern practices.

The school buildings, designed by Eliel Saarinen, Detroit, follow the outline of the original farm buildings on the ground Mr. Booth donated, thus showing a felicitous arrangement of buildings

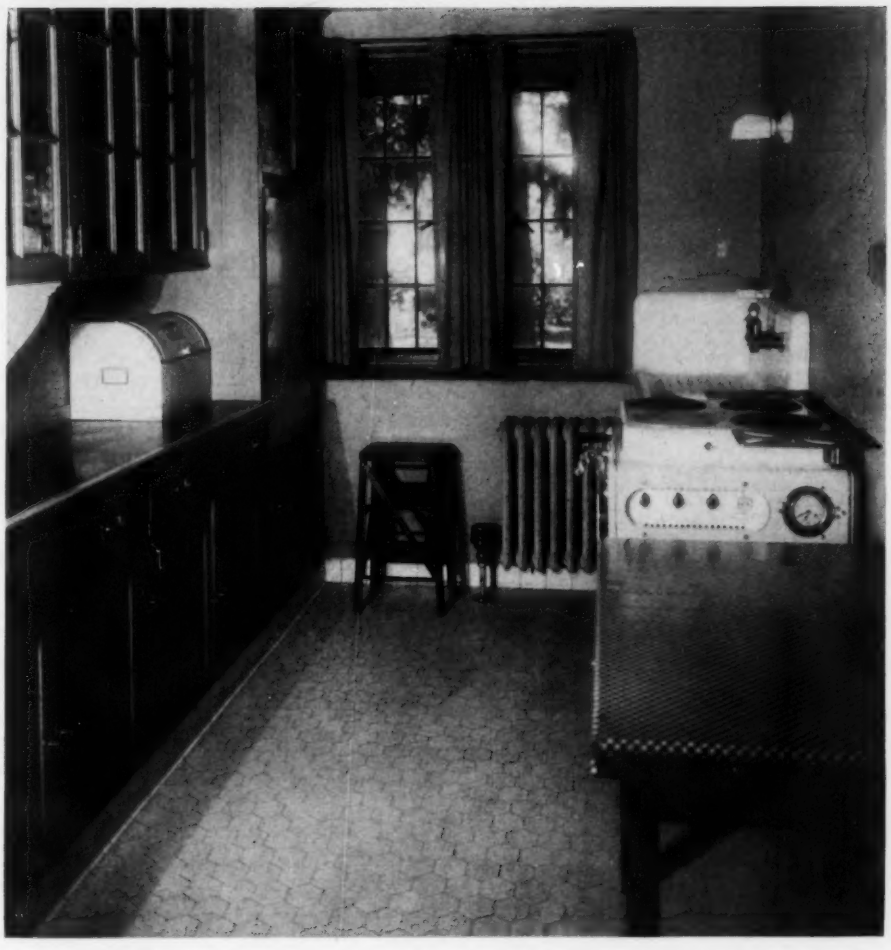
The homelike office of the medical director of Cranbrook School is calculated to put the pupil being examined at his ease.

around open quadrangles.

The infirmary itself is of the cottage type, having two floors. The large office provided for the medical director is a homelike room with casement windows overlooking a garden and with an attractive chimney piece. It is calculated to put the boy who is being examined entirely at his ease.

There is a diet kitchen as well as a club room where additional midmorning or midafternoon lunches are given to underweight children. Physiotherapy rooms are equipped with alpine lamps and violet ray apparatus. X-ray equipment is also provided as well as an operating room in which major work in emergency cases can be done.

All equipment in the hospital is of the latest type. The three separate kitchens contain electric stoves, noncorrosive metal sinks and other service equipment. The china used in the hospital has a beautiful Indian tree design.



Lunches for underweight children are prepared in the diet kitchen.

The hospital has eight-bed wards, with one suite that has no physical communication with the rest of the building and two others that can be isolated.

The resident graduate nurse has a suite of three rooms reserved for her use. There are two other trained helpers in the infirmary.

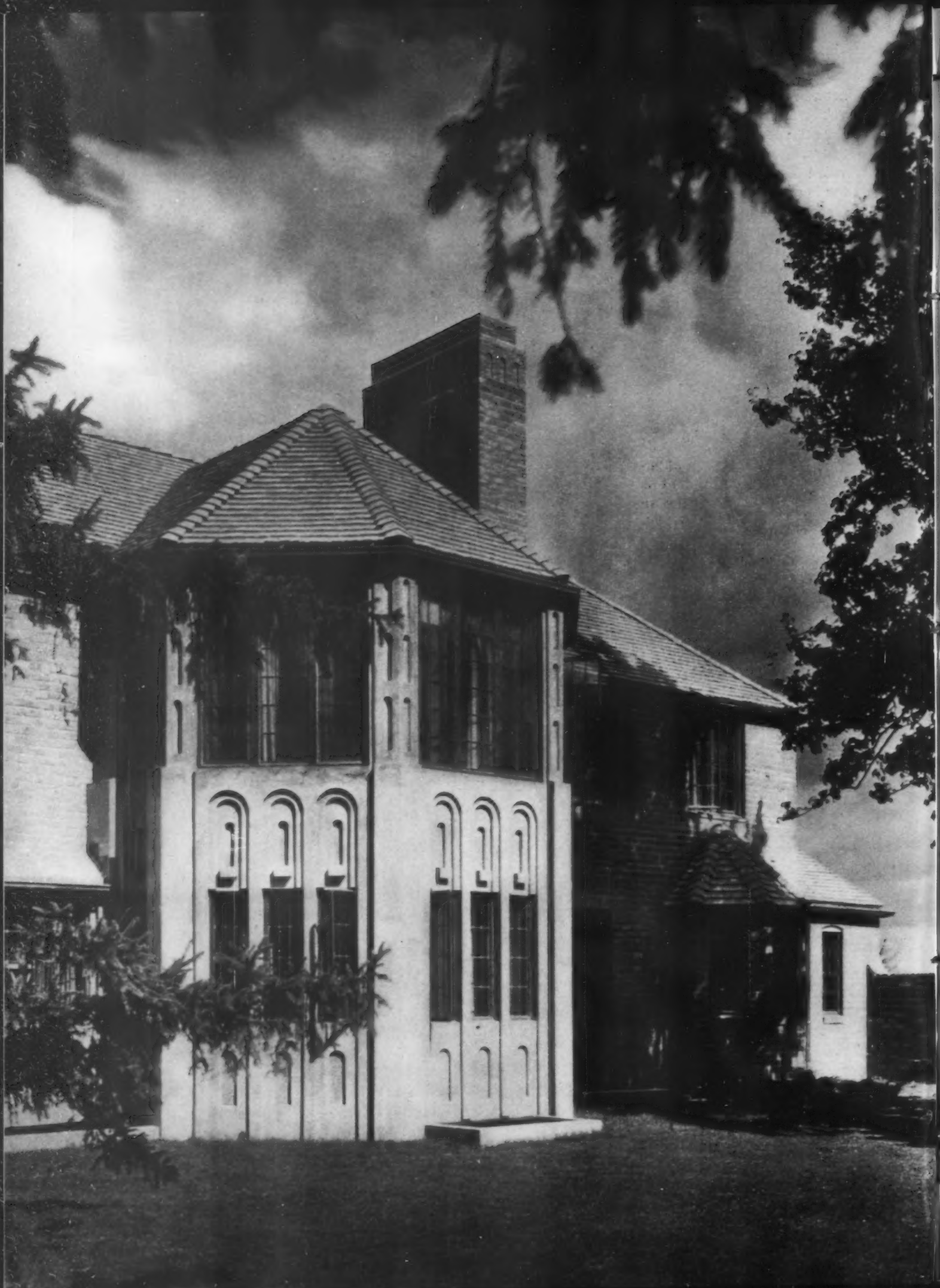
Soon after school opens, every boy is given a physical and mental examination which lasts approximately one hour, half of the time being devoted to physical and half to mental tests. Modern psychiatric methods are employed, and after the physical inventory is complete, mental tests are made to find intelligence levels. The initial intelligence tests are only cursory ones and are secured on a test question basis. Later examinations are more exhaustive.

The physician's whole purpose is to study and understand the boys. When he began his work two years ago, he endeavored to classify them according to standard behavior patterns, (a) the commonly labeled cyclothymiac or up-and-down type; (b) the schizoid (withdrawn-quiet-introverted); (c) the normal type (social-adaptive, some freshness of interest).

Here a surprising difficulty arose. The boys simply did not "type" in the fashion prescribed. Accordingly the results of the tests were tabulated and have resulted in classifications of certain whimsical types as follows: (a) the Peter Pan type, unselfish and capable of outside or altruistic interest; (b) the tinker toy or mechanical type. These boys frequently come from prosperous families with technical interests of some kind, mostly in automotive industries; the cultural pressure does not seem to alter the mechanical bent; (c) an unclassifiable group, definitely neurologic in type, with a tendency towards imagining things; predominating history or family characteristics are not found in this group and probably need not be stressed.

After the boys' mental characteristics are found and the health standing is determined, their programs are definitely adapted to their needs and abilities. Although the curriculum at Cranbrook School does not differ materially from any junior and senior high school course, there is a certain amount of flexibility in it that is beneficial to the boys. Case study of behavior shows that, at least in Cranbrook, there is hardly any correlation between behavior and academic performance.

The physical examinations given are more com-



plete than average ones, and follow the procedure established at Harper Hospital, Detroit.

An interesting fact about the condition of this group is that a high percentage of the boys have had the usual (and obvious) medical services. There is more apt to be too much rather than too little attention given these boys of prosperous but not necessarily wealthy homes. The physical findings, then, begin beyond the elementary stage. Often the

Certain types of injured hearts resulting from children's diseases are carefully watched for in the heart and circulatory system. Four or five out of every 150 pupils undoubtedly have some heart damage. Electrocardiograms of these children with silhouettes showing the form and size of the heart are taken. Regular attendance at the clinic and decreased activities are required of the children who are found to have any serious heart defects.

Here in the infirmary's well equipped examination room each boy is given the careful physical examination required by the school.

statement of the physical condition that is required before entrance to the school comes from specialists.

The examination, then, is more thorough at Cranbrook than is customary elsewhere. Eye tests include fundus examination. About 10 per cent of the boys need special glasses. Hearing is unusually carefully tested. Boys with perforated drums, representing a considerable percentage of the pupils, are barred from swimming.

The examination is by "systems" rather than organs or parts, and children that need a follow-up of any kind are directed to the clinics on the same basis. There is one clinic daily for each system. Light treatment may be given all the year. Fifteen children who received light treatment this year did unusually well in avoiding colds.

In the musculoskeletal group, skin, muscle and bone examinations are made. There is a flatfoot clinic and there is a complexion clinic (for acne and other skin diseases).

A strictly individual examination of no more than two and frequently only one pupil at a time is given in the behavior clinic. The boys in this group represent rather definite psychologic problems which may be slight, but are not unimportant, such as the intelligent boy who has no drive or the boy who is competent but who is slumping in his studies. An analysis of work methods with individual recommendations as to study systems is made of the last group. The curriculum is graded on the basis of the average of 5,000 Michigan boys and is meant to meet actual requirements of average boys, such as those at Cranbrook represent.

Little definite intestinal disturbance is found in the intestinal clinic, but the school diet table is popular with the boys. No one is compelled to eat at this table, but eligible candidates for dietetic measures respond cheerfully to suggestions that they do so. Weighed diets are given at the table, but the school heads consider that it would be possible, by individualized presentation methods, to enable the boys to make correct selections from the ordinary Cranbrook dietary without the bother of weighed supplemented rations. There is a diet table for ten boys, five overweight and five underweight, with an extra table for five more and a waiting list of thirty. These diets are weighed and their values expressed in calories. The boys are instructed in the meaning of the caloric measure.

Controlling the Pupil's Weight

Results of these dietary measures are uniformly good. The average gain of the underweight boys is ten pounds in six weeks and the average loss is somewhat greater than ten pounds. Weight charts are kept, with pictures of the boys before and after their course. The diet of the overweight boys is kept down to 850 calories, while the underweight boys start at 800 calories and gradually work up to 3,400. The latter acquire taste in eating and an interest in variety. Thin boys maintain their gains, but the overweight boys sometimes fail to maintain the ideal weight. It is interesting to note that regardless of glandular types the boys gain or lose as desired. The boys stay at the table from one to six months.

Certain special diets are served for groups other than the underweight or overweight. There are low protein diets for kidney disorders and iron-rich diets. Many receive cod liver oil at eleven and milk at three o'clock, with an apple at bedtime. Roentgenograms of the skull and basal metabolic determinations are made in these cases. The glandular factor is thus provided for, while the diet tables are strictly a matter of dietetic management. No cases are included here that may be receiving glandular treatment. The glandular types show a surprising percentage of early thyroid cases and Fröhlich's syndrome; there are three or four such conditions in 150 pupils. No pupil with diabetes requiring insulin are found at Cranbrook.

In the sex or biologic clinic the reproductive organs are examined. In the fall term of 1930, a course on sex education was begun as a free, extracurricular study for any who were interested.

On the whole, health at Cranbrook School is extremely good, although the boys are not selected because of good health. In the main the physician's aim is prevention rather than cure. With this object in view serum protection is given all to prevent diphtheria. The Dick test for scarlet fever is also made on admission, and fifty to sixty pupils are immunized annually.

Athletics is stressed at Cranbrook School. Ninety per cent of the masters have been athletes and the school is well equipped for both summer and winter sports. There are five football gridirons, five baseball fields, two gymnasiums, seven handball courts, five asphalt tennis courts, with eight more to be constructed by autumn, and two full-size hockey rinks. A little lake down below the quadrangle has twenty canoes and on the island is a cabin where fifteen boys can camp. In the winter there are skating and tobogganing. With all this equipment for athletics, there is full cooperation between the health department and the athletic director. Any boy with a physical impediment is restricted so that his athletic activities will not overstep his limit of endurance. Fatigue is avoided. But boys who are capable of athletic prowess are required to take part in the sports.

Activity schedules are kept full but are wisely divided between work and play. Regular hours, well planned menus and mental as well as physical supervision combine to make the health standard of the boys at Cranbrook School unusually high.

What the Play Leader Means on the Playground

More necessary than playground apparatus is the play leader, since it is the play leader who creates and vitalizes the playground and who makes it possible for children to have freedom in play and to secure the health producing, character developing value which play under proper conditions can give, says a release from the Playground and Recreation Association of America.

Play leadership is necessary to teach children cooperation and team play, and the great fundamental lessons of human relationships. Where many children are playing together, a play leader is necessary if the playground is to be kept from falling into the hands of the gang and becoming a public nuisance. Experience has shown that more children will come to a playground when a successful leader is in charge.

While a good play leader can do much without apparatus, a certain amount of it is valuable because it provides an outlet for the fundamental play interests of children. The apparatus most commonly found on playgrounds includes slides, swings, seesaws, the giant stride, horizontal ladders, traveling rings, the sand box and the horizontal bar.

Rebuilding the Curriculum of the Small School System

A description covering the high lights of the changes made in the courses of study of the schools of West Allis, Wis., dealing mainly with organization and content

By HARRY B. NASH, Director of Research, West Allis Public Schools, West Allis, Wis.

CHANGES that have been made in the organization and content of our courses of study can best be indicated by considering the courses by subjects as listed under our curriculum organization.

This does not mean that the courses were worked out independently of each other. There is a natural relationship between the various courses of study, and this relationship we have sought to preserve by the nature of our curriculum organization. The more or less artificial divisions into subjects is a device of the educator that like other useful devices has lent itself to much abuse. In a comprehensive curriculum building program such as we have sought to establish in common with many other schools, these abuses tend to be greatly minimized.

The significant facts concerning our new English course in the elementary grades (one to six) are the reduction of the amount of formal grammar taught and the stress placed upon functional grammar or language usage and composition or language expression. The only formal grammar taught is in the sixth grade. The amount is negligible and the subject is given only when the class can handle it successfully. Each course of study contains a list of typical language errors and of certain errors peculiar to this community.

How the Work Is Reorganized

In junior high school the mastery of language and grammar essentials is the aim in the B grades. A list of grammar essentials has been carefully worked out and graded. Ninety, 85 and 80 per cent mastery are the achievement goals set for the three ability groups (X, Y, Z). Letter writing and oral and written composition work are also used as a means for correcting spoken and written English. In the A grades literature is taught. The aim here is to develop reading skill, to introduce reading as a worth while and pleasurable activity and to inculcate worthy ideals.

In senior high school the work is entirely reorganized and is divided as follows:

10B: special writing, composition. The course includes both oral and written work and aims at securing naturalness in expression.

10A: journalism, biography, essay. The pupils receive guidance in the reading and use of newspapers and magazines, together with some appreciation of journalism as a profession. Biography is studied for its inspirational value and to cultivate an appreciation of this extensive field in literature. The essay is studied to develop an appreciation of this type of literature.

11B: novel, short story, poetry. An attempt is made to develop an appreciation of these literary expressions of the thoughts, emotions and ideals of the human race.

11A: advanced training in organization and research. The work centers around informal oral discussion and formal debating with the aim of developing the habit of careful and logical reasoning.

12B-A: a study of English literature. The previous studies in literature are unified into a coherent whole. All junior high school English and 10B-11A English are required of all pupils; 12B-A is elective.

In the first and second grades the social studies work has been combined with the science work and written into one course of study. Five units of work are covered in each grade, the work being adapted to the level of the grade. The five units of work now offered in the first three grades are plant life, animal life, civics, physical geography and geography. In the third grade a regular period is set apart for geography, and a study is made of the customs and life of children of other lands in addition to a consideration of some geography

of local interest. The other units of work on plant and animal life are further developed in the third grade, but a separate period is devoted to them.

Beyond the third grade the science work in the form of nature study is considered separately and has a separate course of study.

The work in social studies in the intermediate grades has been reorganized on the one-cycle plan, the attempt being made to treat history and geography as related subjects, finishing formal geography in the sixth grade. The reorganization runs as follows: 4B: Wisconsin and the North Central States; 4A: the rest of the United States; 5B: the rest of America; 5A: Asia, Africa and Australia; 6B: Europe; 6A: a review of the United States and a consideration of its relationship with Europe. The pupils seem best ready for this in 6A, the last exposure to social studies in the elementary grades. A historical European background is given at this time.

The Junior High School Pupil and His Work

In junior high school the work is entirely reorganized. Here the pupil is introduced to the chief conditions and problems that confront him as an American citizen. In the seventh grade he studies the people of the United States at the business of making a living and seeks to show why we have done this better than any nation has ever done it before. The pupil is also introduced to the conditions under which other peoples live and work. The change brought about in modern industrial nations is emphasized.

In the eighth grade the pupil studies the westward movement in this country and the growth of modern business and commerce. The political history of the country is also considered.

In the ninth grade the pupil studies the problems of immigration; the problem of American government; the industrial revolution, and the new internationalism.

In senior high school, ancient and medieval history are offered in the tenth grade; modern history in the eleventh, and American history and social problems in the twelfth. American history is required of all pupils. The change made here was the devoting of one year instead of one semester to modern history and the addition of social problems to the twelfth grade work. The latter course is eminently practical and is divided into three parts—sociology, economics and civics.

The reorganization of the mathematics curriculum for the elementary grades consisted mostly in a readjustment of content material and teaching methods. In the first grade the work is somewhat informal. By the end of this year the pupil is expected to be able to count to 50, to reorganize numbers within this range, and to know thirty-three addition and subtraction combinations. In the second grade the work becomes more formal. By the end of this year the pupil is expected to be able to count to 100 and to read and write numbers within this range; to finish the 100 simple addition and subtraction combinations; to do column addition and addition by endings, and to have some general information concerning such matters as the use of the calendar and the fraction one-half.

By the end of the third year the pupil is expected to complete the simple multiplication and division combinations and to acquire the ability to "carry" in subtraction. In the fourth grade speed is first stressed in the drill work in simple combinations. Long division is here introduced. In the fifth grade, speed in the combinations is increased and fraction work is taken up.

In the sixth grade, speed and accuracy in simple combinations and more difficult combinations are further stressed and work in decimals is taken up. A change in emphasis in problem work was made after considerable experimentation. It was found that pupils learn to solve problems by solving them. Too much time was previously spent on analyzing and not enough on actually working problems. The average textbook is lamentably short on problems. To meet this situation each new course of study has a supplement in the form of a local problem book containing about one thousand problems.

How Mathematics Has Been Modernized

The junior high school work is now reorganized around the various branches of mathematics. The purpose is to offer a good foundation for situations involving mathematics in everyday life as well as for the further study of mathematics and the sciences.

In the seventh grade, graphs, percentage and business forms, simple equations, measurements of length, square and cubic measure, in addition to the review and continuation of work done in the elementary grades, are taken up. In the eighth grade problems of home and business life, ratio and scale drawing and elementary accounting are considered.

In the ninth grade two courses are given, general mathematics and algebra. Both courses carry sufficient algebra to be accepted as entrance requirements for a university. In general mathematics the work is largely a review and extension of the eighth grade work, with more algebra. In algebra emphasis is placed on graphs, formulas and practical applications.

In the senior high school no change was made in mathematics. Plane and solid geometry, ad-

vanced algebra and trigonometry are offered. All pupils going to college must take advanced algebra.

The science work for the primary grades has been considered under the social studies group. In the intermediate grades, thirty minutes a week are devoted to nature study and this is correlated with garden club work. In the fifth grade hygiene is taught as required by state law.

In junior high school no change was made in the content or the organization of the science work. Physiology is now, as formerly, offered in the seventh grade and general science in the eighth grade.

Changes in Senior High Courses

In senior high school the only change in organization has been made in biology. The work is now divided into fall and spring biology, so that materials used will be more readily available. Both 10B and 10A grades take the same work at the same time. The traditional courses in chemistry and physics are offered in the eleventh and twelfth grades, though they are by no means presented in the traditional manner.

In the foreign language department several changes were made. General language is now offered in the 8B grade. This is a study of the English language and its twofold source, Anglo-Saxon and Latin. Word building is given considerable attention. It is in the nature of an exploratory course. In 8A German and Latin are offered which are also in the nature of exploratory courses. From the ninth grade up the organization of the work is the same as previously, with an offering of three years' advanced work in German, Latin and Spanish.

Some reorganization was made in commercial work. Typewriting, commercial arithmetic and commercial geography are now offered in junior high school. The purpose of these courses is twofold—to introduce the pupil to the more specialized commercial training in senior high school and to give valuable training of a commercial nature regardless of the future vocational choice.

The senior high school prepares pupils for stenographic positions, offering in addition to the required shorthand-typewriting, commercial law, office practice and bookkeeping.

In the industrial arts department there has been considerable reorganization of the offerings and of the courses of study. In the seventh and eighth grades of junior high school industrial arts work is required and consists of woodwork, home mechanics, general metal work and printing. The aim of this course is to provide exploratory experiences; to offer related information; to provide occupational information for guidance purposes, and to develop "handyman" abilities.

In the ninth grade elective work is begun. This is a period of semispecialization, when abilities are further tested and crystallized.

In the senior high school the work is vocational. The following constitute the offerings: ninth grade—bench woodwork, machine shop practice, electricity and auto mechanics, printing, mechanical drawing and sheet metal; tenth grade—machine woodwork, machine shop practice, machine drawing, auto mechanics, printing and pattern making; eleventh and twelfth grades—machine drawing, architectural drawing and linotype operating.

The courses of study in industrial arts have been completely rewritten and reorganized. Lecture work and study of related content receive especial emphasis.

The organization of home economics courses is the same as that of the industrial arts work. The seventh and eighth grade work is required and covers studies of clothing and related material (7B-8A) and food and related material (7A-8B). Considerable emphasis is placed on related material, such as budget making, balanced menus, infant hygiene, intelligent selection of ready-made garments and care of the clothing.

In the ninth grade and in the senior high school, four semesters of clothing work are offered and three semesters of food work. The second and third semesters of clothing study are devoted in part to millinery and the third semester of food study is devoted to cafeteria work. In the required as in the elective work considerable stress is placed on related information, such as budget and wardrobe planning, house planning, textile studies and large quantity buying and cooking.

Art Courses Meet Present Demands

In the primary grades considerable reorganization in art courses has taken place because of the curriculum project. The work now given in the primary grades is intended to develop interest in illustration, modeling and construction so that they may become a means of self-expression. A feeling for pattern, form and color is developed, with many opportunities for free expression. Picture study is a unit of work in each grade. The work is closely correlated with other school work.

The art work in the intermediate grades helps to lay a better foundation in drawing, modeling, construction and appreciation. A more formal analysis of color is made, page balance and pictorial arrangement are stressed together with costume design and home planning. Craft work and a greater freedom of expression are found in

these grades. Picture study is a unit of work in these grades also.

In junior high school the work is general and practical. Pupils receive information as to the possibilities and demands of professional art work, the manufacture and source of materials used in art and the historical background of the craft. Appreciation is developed for the beauty in nature, architecture, pictures, clothing, sculpture and the ordinary objects that form a part of our daily life.

Art is required in the seventh and eighth grades and is elective in the ninth, tenth, eleventh and twelfth grades. The work is individual beyond the 10B grade. Courses in fine and applied arts, commercial art, costume design and house planning are offered as the needs arise. Art history and appreciation are offered with all courses.

Music Lessons Offered to All Pupils

Little reorganization of the music work has been made as a result of the curriculum project. The offerings are in line with the best practice throughout the country. The work is required through the eighth grade. Group courses in harmony, music appreciation and history of music are offered in the advanced grades. Throughout the whole system, music lessons are offered to all pupils. In the lower grades this consists mostly in piano lessons. In the junior and senior high school, individual instrumental lessons are given on practically any orchestral and band instrument, and if so desired the instrument is lent by the school. Group orchestral, band and glee club work are offered.

A comparative study is being made by the spelling committee of accepted worth while spelling lists, with the idea of obtaining a list that can be incorporated into the spelling curriculum and will give a supplementary list to the textbook list in use. Much stress is placed in the course of study on the method of teaching spelling, and this is one subject where uniformity in method is required. The method suggested is a modification of the individual pre-test method. Pupils in the seventh and eighth grades are exempted from spelling if they meet the requirements on the exemption test selected for use. This exemption is determined for each pupil each semester, hence, all pupils take each final exemption test.

A modified and intelligent use of the Palmer system of handwriting now prevails. Constant use is made of writing scales, particularly the Ayres scale, since this is the one used in junior high school for exemption purposes and thus in a sense constitutes our standard. Short drill periods are given, and pupils doing standard work as rated by the Ayres scale are excused from such drills. Attention is paid to correct posture. This is considered fundamental and is looked for in all subjects. Legibility is considered the most important characteristic of handwriting. Too much stress is not given to arm or muscular movement. Finger movement is allowed if the pupil maintains the "proper position, ease of grasp and freedom of sideward movement." (Freeman.)

In the intermediate grades an attempt is being made to obtain a carry-over in spelling and handwriting. Teachers select a sample of the language work and this is graded as to handwriting and spelling, the latter being marked according to rules agreed upon by all teachers. Samples are selected at the beginning of, and at the end of the semester as well as twice during the semester. The mark here obtained becomes 50 per cent of the spelling mark, the other 50 per cent being obtained from the spelling lesson. The pupil knows his mark is so obtained but he does not know which language paper is selected.

This description covers the high lights of the curriculum changes, dealing mainly with organization and content. A great part of the curriculum work that is embodied in the new courses of study is not, of course, evident in this outline.

How Personnel Bureau Serves at University of Kentucky

A new development at the University of Kentucky this year has been the establishment of a personnel bureau to serve students and guide them in their vocational adjustments. Dr. Henry Beaumont is executive secretary of the bureau and Dr. J. B. Miner, head of the department of psychology, is director.

The bureau has a university advisory committee, and assists students who are having difficulty with their college work by pointing out the weak spots in their study methods and by suggesting improvements along the lines of efficient study. The bureau is collecting information concerning various occupations open to college trained persons, and is making contacts within and without the state. It also refers students to the departments best prepared to advise them as to the preparation they should make for the type of work they are contemplating.

The personnel bureau will not undertake any responsibilities of the various deans and faculty members, but works with the idea of supplementing their service and cooperating with them in their personal contacts with the students.

Promoting Efficient Janitorial Service

Practical suggestions concerning the care of the school building and its equipment are made in this article which is the first of a series on the subject

By CHARLES E. REEVES, Elmira College, Elmira, N. Y.

THE first requisite for good work on the part of school janitors is good working conditions. Even the best janitor will tend to fall into careless and slovenly ways if he feels that conditions are such that, regardless of how much effort and thought he gives his work, he cannot obtain satisfactory results.

A site well drained, a front yard well covered with grass, playgrounds that are surfaced with a good stand of grass, crushed rock, or gravel, and paved streets around school property, present, from almost all standpoints, an ideal external situation for the janitor's work. These conditions affect the cleanliness within the school building. When playgrounds and streets are muddy the work of cleaning, of scrubbing and mopping, of oiling floors and dusting is greatly increased.

Well kept yards add greatly to the appearance of school buildings. If walks lead directly from the street to school entrances it will be a much easier task to keep the front yard beautiful. Nothing is more exasperating to children than to have to turn square corners or to follow a winding walk. Unless children are continually watched by the janitor or by someone else, they will go to and from the building by the most direct route; hence, the advisability of providing straight walks that lead directly to the entrances.

While school buildings are constructed primarily for instructional purposes, facilities for janitorial service must also receive attention. School architects are taking into account educational purposes in the construction of school buildings. It is essential that some consideration shall

These janitors are being instructed in the correct way to clean a blackboard.

also be given to conditions that will facilitate the administration of the school program and the care of the buildings.

The height of a building is a factor in determining the amount of time and effort required for its daily cleaning. The growing tendency in some places to build one-story or two-story buildings with but little basement space will help to reduce the janitor's load. Basement rooms are nearly always difficult to keep clean. While there are educational reasons for building low buildings without basements, there are also housekeeping reasons for this practice.

Building Features

If buildings are several stories in height, elevators should be installed for the use of janitors in carrying cleaning materials to the upper floors. High buildings should also have a rubbish chute opening at every floor and leading to the basement.

It should be possible for a janitor to burn rubbish within the building. A basement flue leading directly to the chimney is better than the use of the furnace or the yard for burning rubbish. The burning of rubbish in a furnace in the winter makes difficult the desirable control of heat and when furnaces are not in operation it is detrimental to the furnace and the empty boiler. The burning of rubbish in the yard is dangerous and often makes the playgrounds unusable because of the smoke. In any case rubbish should be burned immediately after it is collected in order to eliminate danger from fire within the building. If the flue is in the furnace room, it should, of course, not be in proximity to a coal bin, but if the coal bin is properly placed it will not be in the furnace room, but adjoining it.

Natural slate blackboards are the easiest to keep clean. They also give much better service than blackboards made of any other kind of material. Slate blackboards will not wear out and, except for the remote possibility of breakage, will outlast the building in which they are installed, and, therefore, will be found to be the cheapest in the long run. The installation of natural slate blackboards will save the time and expense of frequent refinishing, which is necessary with blackboards made of pressed paper, composition, building board, wood or gypsum. Slate blackboards can be cleaned more quickly because rapid methods can be used that are impossible with blackboards that will be injured by water.

Many classrooms have too much blackboard space.[1] A general reduction in blackboard area in many rooms of a building would not only make possible more attractive classrooms and reduce constructional expense, but it would reduce the amount of time janitors are required to devote to blackboard cleaning.

Floors should be smooth and of hard wood. If they become worn or splintered due to inadequate care, they should be relaid or they will become traps for dirt.

Window panes should be fairly large to facilitate the work of keeping them clean, for the larger the pane the more rapidly and effectively it can be cleaned. The cost of maintenance, however, demands that the panes be not so large as to increase greatly the expense of replacement, for school windows are particularly liable to breakage.

Inside woodwork should be plain to facilitate cleaning. It is difficult both to dust and to wash dirt out of deep crevices or from figured carvings. It will be a convenience to the janitor in sweeping, scrubbing and mopping if the strip at the bottom of baseboards is made to curve in, presenting, at the corner formed by the wall and floor, a concave surface. The more common but less desirable practice is to use at the bottom of baseboards a strip that curves out, thus forming two sharp corners instead of one that is curved in.

Brass, bronze, nickel and other metal work should be of good quality. Otherwise, it will soon become tarnished, lose its luster and give an untidy appearance. Regardless of how much time is spent in polishing poor metal, good results cannot be obtained. On the other hand, good brass, bronze and nickel will retain their sheen if they are occasionally rubbed with a metal polish.

Providing for the Janitors

Porcelain should be used for sinks, drinking fountains, lavatories and toilet bowls. Toilet bowls should be capable of being flushed immediately after use. Their periodic flushing at regular intervals throughout the day, whether or not they have been used in the meantime, is unsatisfactory. One of the best types is the individual self-flushing toilet. This flushes itself when pressure is removed from the seat. The more common school toilet fixtures, however, are flushed by means of a handle, button or chain.

Drinking fountains should be of the wall or pedestal type to facilitate cleaning operations. All porcelain pieces should be genuine rather than made of iron covered with a layer of porcelain which will crack and chip away.

Proper service quarters should be provided for janitors. These include an office, a storeroom, a workroom and a toilet room containing a lavatory. Without proper quarters the janitor's work will

[1]Hart, F. W. and Peterson, L. H., "Economy in Schoolhousing," the American School Board Journal, vol. 73, No. 1, July, 1926, p. 42, and vol. 74, No. 5, May, 1927, p. 65.

Movable furniture facilitates the proper care of schoolroom floors.

be handicapped. If supplies are scattered here and there about the building, they will not receive proper care and supply records will not be kept. Moreover, a supply room should be used for supplies and not for worn-out and broken furniture.

Janitors should be provided with an office in which the head janitor-engineer can keep his records and make his reports and to which other janitors can go to read communications sent by the supervisor of the janitorial service or by the principal of the school. An office will serve as a place where assistants can receive instructions and discuss their work with the head janitor-engineer. There should be a janitors' workroom where all tools should be kept. There should be a separate toilet and dressing room in which janitors may wash themselves and change their clothing.[1]

Little need be said concerning special rooms, such as home economics rooms, shops and laboratories. Some of these rooms present special cleaning problems, however. Care should be taken that the type and placement of tables, cases, machinery and the like, are such that janitors can clean the floor space beneath them. Provision should be made for lockers or wardrobes for wraps. The hanging of wraps in corridors is always a nuisance since the wraps are continually falling down and must be picked up before the janitor can sweep the corridors. Even if they are hanging on hooks the janitor's cleaning tool may cause them to fall to the floor.

The location and size of the furnace room are important. The movement of coal and ashes is bound to produce some dust regardless of the care exercised. Such dust may rise and circulate throughout the building. It is much better if the furnace room is in a separate building at the back of the main building. If a furnace room is in the basement, there should be closely fitting doors to the furnace room to prevent dust from rising into the upper areas of the building. The furnace room should be large enough to prevent a crowded condition. The coal bin should be separate from but adjacent to the furnace room.

Radiators should be set above the floor at a height sufficient to make possible the use of a floor brush or other cleaning tool beneath them.

The effort and time required to care properly for school buildings and the efficiency of the work as measured by the results obtained, depend to a

[1]Reeves, C. E., and Ganders, H. S., School Building Management, pp. 49-50, Bureau of Publications, Teachers College, Columbia University, New York.

large extent upon the kind of building and its condition. The efficient care of a new building or of one kept in good repair needs less money and effort than the care of one that has been allowed to deteriorate through the lack of proper care. For example, a janitor will have less difficulty in keeping the walls and ceilings clean if the roof of the building has been kept in repair.

Educational Equipment and Supplies

Since janitors must care for equipment as well as for buildings and since the use of supplies in the classrooms is a cause of some of the dirt accumulations, the kinds of equipment and supplies used have a bearing upon the amount of time and effort required of janitors and the effectiveness of their work.

The single pedestal combination desk and seat facilitate the daily cleaning of floors, whatever method is used. The pedestal desk with pedestal seat and the four-leg combination desk and seat are next in order, followed by the pedestal seat and four-leg desk. Movable chair-desks, chairs used with four-leg desks and chairs used with tables are less desirable from the standpoint of the daily cleaning of floors, while it is practically impossible to clean under the old type of four-leg desks with four-leg seats. This is true whether the method of cleaning floors is the use of the hair or bristle floor brush, of the dry floor mop, or of the central vacuum cleaner.

Movable furniture, however, will facilitate scrubbing or mopping if this is ever necessary. It will also facilitate the proper treatment of floors. If stationary furniture is removed considerable time is required both to remove it and to replace it. If it is not removed, the results of scrubbing and oiling or waxing will be less effective.

Desks and seats are more easily dusted and kept clean if they are made of a good grade of hard wood, properly lacquered, waxed and polished and if the metal portions consist of straight rather than of curved and grooved pieces of iron. Each desk should be equipped with an inkwell.

Chalk should be hard enough to reduce the amount of dust arising from this source, yet not so hard that it will scratch the blackboard or adhere so closely to it as to make cleaning impossible.

Erasers should be made of soft felt strips attached to hard felt backs. Felt strips glued to wooden backs will pull away from the backs if the erasers are cleaned as often as is necessary for their effective use. Erasers having thin or hard felt strips will not sufficiently absorb the chalk dust from the blackboards.

An electrical clock and bell system may either increase or decrease the work of the janitor. The batteries of electrical systems need frequent charging, and the clocks and bells must be kept in working order. On the other hand, separate clocks must be wound and set weekly. Bells must be sounded at various times throughout the day, a duty that may greatly interfere with the janitor's work. The ringing of bells can usually be performed better from the principal's office.

An important item of janitorial equipment is the central vacuum cleaner. With this system the dust from classrooms is drawn by vacuum into a tank in the basement. The building is piped with risers leading up through the partitions or walls, and with several inlets opening from every floor. In operation, a hose that is attached to the vacuum tool is transferred from one inlet to another, the hose thus permitting the tool to reach all portions of the floor of the building. The dirt and dust are thus drawn directly to the vacuum tank.

For the cleaning of floors, better work can be accomplished with the central vacuum cleaner than with floor brushes and less effort will be required by the janitor if he has learned the proper methods of procedure. There is, also, usually a slight saving in time required to clean a given floor area. Since dust is drawn out of the room, that portion of dust on woodwork and furniture that is caused by sweeping, is eliminated. This means that dusting may be accomplished more easily and more effectively. The vacuum cleaner may also be put to a variety of other uses. The large portable vacuum cleaner, while it lacks many of the advantages of the central vacuum system, will usually accomplish better results than a floor brush.

Advantages of Electric Floor Machines

Better results can be secured by scrubbing with an electric floor machine than with hand brushes. When hand brushes are used for the work strong chemicals are almost invariably used in order to remove the oil and dirt of long standing. Strong chemicals will successfully remove dirt, but they are detrimental to the cellulose fibers of the wood. A floor machine also means saving an enormous amount of the janitor's energy and time when compared to the old method of using hand scrubbing brushes. The work is more effective and more rapid than with a hand brush because of the greater size of the brush and the more rapid movement and because electric power replaces muscular force.

In a properly maintained building little scrubbing should be done, and none should be done on wood floors. Floors other than wood that are not

treated will need to be scrubbed, however. The electric floor machine has other and more important uses than the scrubbing of floors. Several attachments are supplied with each machine. The machine may be used, with sandpaper fastened to the block, for sandpapering floors, table tops and desk tops. A steel brush or steel wool attached to a block may be used for removing paint or shellac from flat surfaces. Another brush may be used for waxing and polishing floors or the flat surfaces of furniture.

Good Results Depend on Good Tools

With the larger machines there is used a vacuum with a hose attachment leading to a container on wheels. The dirty water is drawn through the hose into the container. This item of equipment increases the cost of the apparatus and is usually not purchased with the smaller machines, the water being removed with a mop and wringer or with a rubber squeegee and floor pan.

While the floor machine is not one that will ordinarily be used every day as is the vacuum cleaner, its use will be frequent enough and of sufficient importance to warrant its purchase. While the scraping and polishing of desks, the sandpapering and waxing of floors and similar jobs are only occasional needs, they are important. The scrubbing of floors, if they are oiled with a poor grade of oil or if they are left unoiled, is an important job that occurs two or three times a year. Terrazzo, composition, cement and other floors of corridors that are not oiled will need frequent scrubbing as well as mopping. At any rate, there will be sufficient use for a floor machine in almost any school building, so that considerable economy of time and energy will result. These, with the greater effectiveness of the work, will amply repay the small expenditure for outlay and operation.

While a central vacuum cleaner or even a large portable vacuum cleaner is the best possible method of cleaning erasers, there are many schools that have no kind of vacuum system. There are various kinds of electric eraser cleaners on the market. Some accomplish only fair results, while others give acceptable service. Almost any eraser cleaner is superior to hand methods of cleaning erasers. In such a cleaner, the stronger the vacuum produced the better will be the results.

Hot water or vapor heating is to be preferred to hot air heating for school buildings, because of the possibility of regulating and equalizing heat throughout a building. Both flow and return mains should be installed. Single pipe systems cause a pounding in the pipes called "water hammer," as the condensed steam returns through them to the boiler.

Thermostats for automatic temperature control should be installed in each classroom, gymnasium, assembly room and other special rooms. The furnace should have a wide double door so that coal may be thrown to either side of the fire bed without too much cooling of the fire. There should be a sufficient number of controls in the form of dampers and gauges to regulate the heat properly. If there is a central vacuum system installed in the building, there should be an extra separation tank and an attachment for cleaning boiler flues.

Automatic furnace stokers have been installed in some of the larger schools that have been built recently. When they are used in school buildings, janitor-engineers are enthusiastic about the results. The stokers save a great deal of time and labor in firing, there is usually some saving in the amount of coal consumed and heat can be better maintained and regulated than by the use of hand methods. Some labor is required to transfer coal from the bin to the stoker, but there is not the continual feeding of the furnace at every quarter or half hour that is necessary for proper hand stoking.

Janitors must have good tools and materials with which to perform their work or the results will be unsatisfactory. Sometimes boards of education require janitor-engineers to supply their own tools. The only advantages in this practice are that it eliminates the loss of tools owned by the board of education and that no records need to be kept or inventories taken. The disadvantages of this practice are that a great number of workroom tools, cleaning tools and yard and lawn tools are needed, tools that some janitors can scarcely afford to buy. Furthermore, particular tools may not be available when they are needed. The janitor can no better afford to lose tools, taken by outsiders or his assistants, than can the board of education. A better method would seem to be to require yearly or semester inventories of tools, to retain only trusted employees and, if necessary, to withhold a small amount from the salaries of janitors to pay for the replacement of tools lost from their buildings.

Equipping the Janitors' Workroom

The janitors' workroom should be supplied with vises, hammers, wrenches, saws, axes, screw drivers and similar tools. The janitors' office should be supplied with desk and various report forms. There should be the necessary outside tools, such as hoes, rakes, spades, snow shovels, lawn mowers and hose, if no watering system is provided. Flat top ladders and window platforms or window straps should be supplied.

Bristle brushes are preferable to horsehair or

fiber brushes. Brushes should have long, thickly packed hairs or bristles, firmly cemented into reversible blocks. The length of the brush block is important insofar as sweeping under desks is concerned. The brush block should be short enough to enter freely the space under the desks and in the aisles, and long enough so that two strokes will not have to be made when one would do. The out bristles will sweep space for an inch or more at either end of the brush block.

Standardizing Supply Lists

When janitors sweep floors with brushes or dry floor mops, the means used for collecting classroom waste is important. Janitors use various kinds of waste containers, among them being (1) a large canvas bag, having stiff wires around the top, (2) a large basket of compressed paper, (3) a large wicker basket on rollers, (4) a galvanized bucket or (5) a homemade wooden frame box in which sheets of composition board or of a sound absorbent material may be used for the sides and the ends, with straps fastened at each end of the frame for handles. The bag is unhandy because of the difficulty of putting dirt and papers into it. The paper basket has no handles. The bucket is too small to hold the waste from the several classrooms. The wicker basket will be satisfactory if it does not leak dust. The homemade box, if it is properly made, is good because it will hold considerable waste without leaking dust. It is not heavy and it is strong enough to allow materials to be packed into it with the hands or the feet.

Sanitary dusters will save time and are as good as dust cloths for removing most dry dust. Feather dusters, while they are capable of saving much time, are ineffective in that they stir up the dust instead of removing it.

Long handled cord mops should be supplied for mopping tile and other hard surfaced floors. A mop cloth, that the janitor must kneel to use, is inefficient from the standpoints of time required, the results obtained and the labor involved.

A wringer of the "bull-dog" type is recommended. It consists of two wooden rollers that are held tightly together by placing a foot on an iron step attached to a lever, the mop being pulled through the compressed rollers. A wringer of corrugated steel rollers turned by a handle which requires the janitor to stoop over to wring his mop, or a V-shaped wringer which presses the water out when the V is closed by means of a handle, are both less effective than the first, but they are far better than any attempt to wring mops by hand.

Janitors should be encouraged to conserve cleaning materials and to preserve tools properly. On the other hand, however, they must have a sufficient supply of cleaning materials at hand and a sufficient number of tools for use, so that their work may be effective. It is poor economy to furnish too few tools. For example, a janitor should not have to use an oil bucket for mopping purposes. He should be given a good grade of oil for floors, but he should not use more than is necessary. This will be about half as much as is frequently used. Toilet paper should be purchased in roll form for economy in cost, but the rolls should not move too freely in their holders for economy in use. Towel holders should be such as not to encourage waste. Liquid soap should be used rather than bar soap.

While the central office in charge of janitorial-engineering service should take the lead, the actual standardizing of supply lists cannot well be done by this office alone. The opinions of janitors themselves are invaluable in selecting both tools and supplies. One of the best means for standardizing lists of tools and supplies is through committees of head janitor-engineers to confer with other janitor-engineers and make a careful test of each sample and report to the group as a whole for its action, with the possibility of vetoes by the central office. In any case, standardized lists of cheap tools and cleaning and other supplies are often the most expensive in the end.

Pennsylvania High Schools Graduate 50,000

The high schools and private secondary schools of Pennsylvania graduated approximately 50,000 pupils during the past scholastic year, says the *Pennsylvania School Journal.*

"It is interesting to note," the *Journal* continues, "that in recent years the rapid increase in school enrollment has occurred in the secondary school, comprising grades 7 to 12. A still further increase is indicated by the fact that the enrollment in grades 9 to 12 of the secondary high schools comprises only about 40 per cent of the individuals reported by the census in the age group, fourteen to seventeen years. The secondary schools of Pennsylvania are rapidly being reorganized on the junior-senior high school basis incorporating the junior high school as an integral part of the state school system.

"In 1900 approximately four persons in each thousand of population were enrolled in grades 9 to 12 of the secondary schools. During the year now closing approximately forty out of each thousand of the population were enrolled in these grades."

The Elementary Principal in Public Relations

In building a program of community contacts the principal must be recognized as a field administrative agent of importance on whose shoulders devolves a vast amount of responsibility

By ARTHUR B. MOEHLMAN, Professor of School Administration and Supervision, School of Education, University of Michigan

THE elementary school principal is the most important field administrative agent in any well conceived and well rounded program of public relations. The maintenance of community relationships is one of his major activities.

The elementary principalship is an agent whose major function is the facilitation of instruction through (1) putting into operation the course of study, instructions and standards of achievement, and supervising the classroom and extra-classroom activities to see that these standards are achieved; (2) carrying out the adopted policies through approved means as directed by the superintendent, which provides physical and educational conditions under which child and teacher may work to best advantage; (3) appraising and reporting educational, social and physical conditions within the school, preparing reports and making recommendations for the improvement of conditions; (4) supplying professional leadership to administrative, teaching and operating agents by collecting data, conducting research and (5) maintaining community relationships.

Making Primary Community Contacts

Since the elementary school principal is a field agent, it is necessary to consider his relationship to the entire program before outlining his general and specific activities in a program of public relations.

The elementary school district is the logical unit around which to build the program of primary community contacts. Each unit represents approximately one square mile and tends to be fairly homogeneous in composition. The mother-child relationship is probably closer during the elementary period than at any other time. Principal and teachers can make better contact with their community than is possible in the secondary schools.

Policy making is a function of the board of education. Development of policy for consideration by the board is an executive activity for which the superintendent is responsible. In a functionally organized school system, policy is developed from a consideration and interpretation of need. Information respecting need must be supplied to the superintendent by the field agents or principals. Thus the first duty of the elementary principal in the development of a public relations policy is participation in the sociological survey[1] which forms the basis of policy development.

What Are the Principal's Duties?

Adoption of policy by the board of education is followed by the development of procedures through which this policy may be made effective. In a democratically organized school system, agents upon all levels will participate in the development of means.

Before a public relations program can come into existence, the elementary principal should have participated in two major activities. His share in the sociological survey will affect directly the development of policies and the means of procedure under which these policies will be made effective. With this brief introduction let us now develop more specifically the elementary principal's place in this activity.

The principal's public relations duties include ten major activities: (1) conducting continuing sociological survey; (2) selecting possible agencies for particular uses; (3) surveying and analyzing possibilities of the teaching and nonteaching agents under his direction; (4) selecting possible community agents, organized or unorganized, as a district nucleus; (5) planning the organization of

[1]The Sociological Survey in the Public Relations Program, The NATION'S SCHOOLS, April, 1930, p. 72.

agents and agencies or developing the specific district program; (6) training the teaching and nonteaching agents; (7) executing the program; (8) surveying the results; (9) appraising the results and (10) reporting trouble spots, at all times, and making recommendations for improvement. Considered in another aspect these activities might be reclassified as those related directly to the interpretation of the schools to the public and those related to the interpretation of the public to the schools. Each of these activities will be considered briefly.

The first work of the elementary principal is to make a sociological survey of the school district for which he is responsible. This survey will form the basis for policy, procedure and the execution of the program. This survey is of primary importance. No public relations program may hope to achieve success which does not rest upon a foundation of fact. Each school district represents a segment of a highly organized and specialized social group. It is essential to determine the cultural background through an analysis of racial composition. Family conditions or home relationships must be studied to determine the best technique through which to develop closer cooperation between the parent, the teacher and the child. The economic life and attitudes of these families must be considered from the institutional aspect. Since many of our most serious conflicts are outcomes of sectarian differences, the ethical life of the neighborhood should be analyzed carefully. This study will include noninstitutional as well as institutional practices. The general community life and leisure time activities are vital for pointing the program to avoid conflict and to capitalize already existing interests.

Studying Social and Political Organizations

No community survey is complete without a study of the legal and extra-legal social and political organizations. Such study is intimately connected with careful examination of the leader group. As those familiar with this condition are fully aware, the leader group includes both the verbal or public titled type and the silent or "under cover" man who seldom if ever appears in the public eye. In organized efforts the silent leader is powerful in determining plans of action. Not only must the principal know who the leaders are, but he must also be familiar with their background of training and with their social, marital, economic and religious affiliations.

The history of past community efforts, successes and failures, requires to be considered. Finally, social conflicts should be located and analyzed and efforts should be made to harmonize them around the public education program. It is apparent that a thorough social survey of the community, organized, mapped, analyzed and kept up to the minute, will form an excellent base upon which to build a program of public relations. The activity of community education is extremely complicated and delicate. It must be approached as objectively and as carefully as any other curricular problem. The public relations program is technically a social curriculum with fewer means of control and a wider range of abilities than the regular school program presents. Its success depends upon the intelligence with which it is approached and developed rather than upon emotion, volume and noise.

How Community Education Should Proceed

The second step is a thorough survey of agencies through which the program of community education is to proceed. In general, these would fall into four classes—social, oral, visual and written. The exact agencies to be selected in each case as best suiting the community needs cannot be stated arbitrarily. Like a school plant, every public relations program must be custom-built to suit the specific requirements of a given unit of organization. Since means must vary with locality, racial and cultural conditions, it is essential that the principal study carefully the findings of the social survey, so that he may be safeguarded in the selection of agencies. In one district a parent-teacher organization might be entrusted with a certain task; in others, owing to past failures, the use of a parent-teacher group would prove a dangerous proceeding. Neighborhood papers will work well in one place and be detrimental in another. Too much stress cannot be laid upon the importance of selecting adequate and safe agencies through which a particular district program of education is to be carried out.

When the possible agencies have been considered and selected, the third step is the survey of teaching and nonteaching agents available within the school organization. These will vary with the size of the school district and the policy of organization. In the dual or multiple executive type, the agents will probably be limited to the teachers; in the unit executive, functionally organized, a greater variety of choice is possible. The widest program might include the following: teachers, clerk, custodian and cleaners, school nurse and visiting teacher.

Every one of these agents should be studied in terms of temperament, personality, social background, social interests, special abilities and interests in order that each may be carefully and intelligently entrusted with the type of activity in

which the greatest success is possible. Some will do their best in speaking, others in quiet social contact, still others in writing, and so on through the entire gamut of possible activities. Initial adjustment of agents is highly essential to success since in these social situations so much depends upon individual initiative, tact and social skill. If the interest factor is neglected, there is bound to be trouble.

It is difficult if not impossible to operate a public relations program with a large measure of success just by dependence upon the institutional agents. There exists a large necessity for the selection, organization and development of community agents who, once trained, will act as a nucleus in carrying out the program. From a purely psychological standpoint the more noninstitutional agents that are intelligently operating within a district, the more effective will be the program. The selection of the community agents requires rare skill. Probably the safest method for the beginner is to use the available organizations to secure key agents. The most frequent are the parent-teacher associations, the American association of university women and the various types of community clubs. Suggestions for possible experimentation would be the use of the "block mother" idea, so successfully used in certain other types of social work. Other possibilities are the gradual enlistment and education of the community leaders, social, political and religious. The best advice to be given in this field is to play safe and to proceed only when success is practically certain.

The Principles of Social Organization

When a diversified program exists and numerous agents participate, the need for organization arises. It should never be considered, however, except as a facilitating device and should be developed only to the point of effectiveness required in execution. The same close organization possible in the institutional program would defeat its own ends in public relations. While essential, organization must be developed so that it is inconspicuous. Apparent spontaneity of action and casualness of method are the acme of the successful social organization. The principal, however, must have a clear-cut plan and a definite means for achieving it. He must know where to place agents and the means through which they work. He must provide channels whereby the information from the superintendent's office may be quietly and quickly digested and transmitted in the most intelligible form both to the school and to the community. He must also provide for reporting back, a problem that will be considered later.

Selection of agencies and analysis of assignment of institutional agents should be followed by a program of training. The agent first of all must have an intelligent understanding of the nature of the public relations activity, its possibilities and its dangers. Each agent must be aware of his individual responsibility for a small section of the program, its relation to the specific school and to public education generally. He should also be aware of its immediate effect upon him as a member of the teaching profession. The best means of preparing agents for participation in public relations is through a specific course in this field by which familiarity with the problem and development of skill in procedure is accomplished. Teaching outlines and a bibliography are now available for use. Professional libraries for teachers may be inexpensively secured for individual schools. In certain systems key teachers are trained in this activity and assigned to individual buildings for the training of other personnel. Whatever the policy, the final responsibility for the training of the personnel, instructional and noninstructional, rests with the principal.

Executing the Program

After the survey has been completed and when the agencies have been selected, the institutional and noninstitutional agents chosen and assigned and the organization of agents and the selection of a specific program made, the seventh major activity is the actual execution of the program. The method by which this will be accomplished will vary directly with the conditions within a given area. In certain centers a cautious start will be made upon possibly a single line of activity; in others, more points may be covered immediately. If doubt exists it is always advisable to proceed slowly and cautiously until understanding and experience make success possible.

In the actual execution of the plan it is well to remember that the purpose is education of the community to the purpose, value, conditions and needs of public education. In this program publicity is considered only as one aspect of a general functional activity. Needs can be considered only after a sympathetic understanding of conditions has been developed. There is so wide a gap between the actual current instructional program and the average adult conception of such a program that it will take considerable time to bridge the first gap before the possible future may be considered. Again, since the most effective long time plan discards the highly emotional appeal that characterizes "high pressure" publicity, the time element must be given serious consideration in putting the program into operation. Success depends upon how well the ground work has been

laid. For this the principal must assume professional and personal responsibility.

Whatever the extent of the program in practice at any given time, the principal must be professionally critical of its functioning. All possible attempts should be continuously made to ascertain the change in community attitude, the elimination of serious conflicts, better adjustment between home and school, the increasing interest of individual parents in school visitation, better cooperation between teacher and parent and numerous other factors related wholly or in part to this activity. Techniques are scarce, and means of objective appraisal practically nonexistent, a condition that requires even more effort in securing the results. At the present time a constructive critical attitude toward the results of the program is of more immediate importance than attempts to secure absolute findings. In some respects it is questionable whether complete objectivity is possible in this field. An intelligently critical attitude towards performance cannot help but be of distinct benefit to performance.

Judging the value of the activities and their effects upon the district and the transmission of this appraisal to the superintendent are the next responsibilities of the principal. The individual principal may only determine and judge the effect of activities upon his own specific district. The superintendent will appraise for the entire system upon the evidence presented by the individual principals. Better methods and practices, general executive suggestions for improvement and an effective general program should be the outcome. Without intelligent appraisal of results by the individual principal, the superintendent would be blind. His interpretations and his possibilities for improvement of the activity depend completely upon the skill and energy of the principals.

Eliminating "Trouble Spots"

While appraisal completes the logical sequence of activity, there is a tenth point that may not be neglected with impunity. In every community, large or small, there are "trouble spots" or conflicts. These may have their inception in community conflicts, community failures or direct conflict between school and community. They may be due to the professional agents, the principal, the board of education, or they may lie completely outside of organization responsibility. They exist most annoyingly in communities where public relations are still considered a vague theory, and they also appear suddenly in the best regulated program. Whatever the cause or the reason, these "trouble spots" are serious. Every principal should be in such close touch with his district that any emotional disturbance or conflict will immediately be reported through either the institutional or noninstitutional agents. These reports should be considered seriously, analyzed carefully, studied and judgment made of the cause of the trouble and the possibility of eliminating it. Each one, as it arises, should be reported immediately to the superintendent so that figuratively he may have his professional hand upon the community pulse and be familiar with changes and shifts in group or individual opinion. The elementary school, completely organized and operating effectively in the public relations activity should be to the school system what the nerves are to the body, flexible and capable of locating and reporting difficulties. Early knowledge permits quick remedy and many a community upset in public education could be prevented if information, carefully gathered, organized and analyzed, is reported early enough.

The Rôle of the Elementary Principal

This article has discussed primarily a school system functionally organized. It is quite obvious to anyone in administration that many of our traditionally administered systems still operate upon the "hush" policy whereby they appraise the effectiveness of their work by the absence of complaints received at the central offices. Principals are quick to recognize these situations and adjust themselves readily to this program. If bad news causes emotional peevishness upon the part of the executive, the natural result is a suppression of such news. The autocrat and the weak hear only that which is known to be pleasing to the executive ear. A "cover up" policy invites disaster.

The modern executive realizes that the worst possible mistake he can make is to shut off the avenues through which community interpretation returns to the central executive. He considers these reports of "trouble spots" as objectively as he receives reports of instructional efficiency, leaky roofs and inadequate supplies. He realizes that the safety and welfare of the schools depend not only upon how effectively he interprets the schools to the public but also how efficiently he can interpret the public to the schools.

Finally, the elementary school district is the logical unit around which to build the field organization for public relations. The elementary principal is the most important field administrative agent in the public relations program. His is the responsibility for planning, executing and appraising the effectiveness of the operation of the plan and its value to instruction. Last, and of extreme importance, he is responsible for locating and analyzing "trouble spots" and reporting upon these to the superintendent.

Where Pupils Must Participate in Extra-Curricular Activities

After four years of experimentation Aberdeen, S. D., has evolved a plan that gives every pupil an opportunity to earn school credit for earnest work in outside activities

By C. J. DALTHORP, Superintendent of Schools, Aberdeen, S. D.

THE value of extra-curricular activities as a part of a school program has been widely recognized during the past decade. Prior to the World War, educators tolerated extra-curricular activities only after high school student groups had insistently requested that they be given at least some small place in the school program. Following the war, educational leaders began to recognize that certain lessons in leadership, cooperation, initiative, self-reliance and honesty could be made more meaningful, and would bring positive results with greater facility if they were taught through extra-curricular sources than if the same lessons were taught in regular classroom situations.

As soon as superintendents and principals recognized the importance and value of these activities from both the morale building and educational standpoints, they not only encouraged participation in such activities but in some cases they outlined plans for making these activities compulsory and provided teacher supervision and direction to make them more effective.

Numerous problems developed that have been solved or are being solved through the trial and error method. Important among these problems are: to find teachers adequately prepared to handle the activities efficiently; to develop a method of financing the program adequately; to prevent overemphasis of the program; to give all pupils the advantages of the program; to find time to accommodate the program; to prevent overparticipation by a few pupils.

Aberdeen, S. D., has passed through the pioneering stages in the organization and development of an extra-curricular program. It claims a system that is well organized and properly financed, one that is producing positive results. The essential features of the extra-curricular activities program of the Aberdeen schools are described in the following paragraphs.

In 1920, the board of education of the Aberdeen

EXPLANATION OF POINT SYSTEM ADOPTED BY STUDENT COUNCIL, 1926-1928

The seventeenth credit required for graduation is made up of points earned in extra-curricular activities. A credit in any subject is made up of 180 hours (5 days per week for 18 weeks for 2 semesters). Therefore, the seventeenth credit requires 180 hours of work. Letting .1 (one-tenth) of a point equal 1 hour of work the total requirement for the seventeenth credit will be 18 points. The points given below are all on semester basis. Allowance is made for time spent by very conscientious officers as well as for these who do not spend as much time as others. Giving one point indicates that the pupil has spent 10 hours on that activity; giving ten points indicates that the pupil has spent 100 hours on that activity during the semester.

Gymnasium: up to 3.6 for two hours per week per semester

Gymnasium: up to 5.4 for three hours per week per semester

Football, Basket Ball: up to 16 points per season for letter men; up to 12 points per season for squad members out all season

Track: up to 5 points per season for letter men; up to 4 points per season for squad members out all season

Tennis, Golf: up to .3 each round played in tournament; up to .5 additional for championship

(Pupils must earn points in some activity besides athletics.)

Senior class:	
President up to	10
Vice-president up to	4
Secretary up to	6
Treasurer up to	6
Junior class:	
President up to	8
Vice-president up to	2
Secretary up to	6
Treasurer up to	3
Sophomore class and all clubs not separately rated:	
President up to	6
Vice-president up to	2
Secretary up to	3
Treasurer up to	3
Student council:	
President up to	10
Vice-president up to	6
Secretary up to	7
Treasurer up to	6
Cabinet member up to	6
Council member up to	3.6
Officers of study hall:	
Chairman up to	6
Vice-chairman up to	3
Attendance monitors up to	4
Other officers up to	4
Committees in any activities:	
Chairman up to	2
Members up to	2
Home room officers:	
Chairman up to	1
Attendance monitor up to	1.8
Banker up to	1
Hall monitors up to	3.3
Hall monitor chairman up to	6.5
Music outside of school up to	1.8
Bible study up to	2
School help rate, per hour	1
Paid work, steady employment, per 4 hrs.	1
Publications, Arrow:	
Editor-in-chief up to	10
Senior editor up to	5
Business manager up to	5
Literary editor up to	5
Junior editor up to	5
Members of committees up to	5
Declamatory and oratory:	
School representative up to	5
Class representative up to	3
Debate letter men up to	10
Debate squad up to	7.5
District music contest up to	10
Glee club:	
2 hours per week up to	3.6
3 hours per week up to	5.4
All state chorus up to	1
Cheer leaders:	
School up to	2.2
Assistant up to	1.4
Class up to	1
Senior Girls' Club, Junior Girls' Club, Senior Boys' Club, Junior Boys' Club: President up to	5
Vice-president up to	2
Secretary up to	3
Treasurer up to	4
Class plays, drama club and operettas: up to	10

These pupils receive credit for participation in a pageant arranged under the direction of the school's student council.

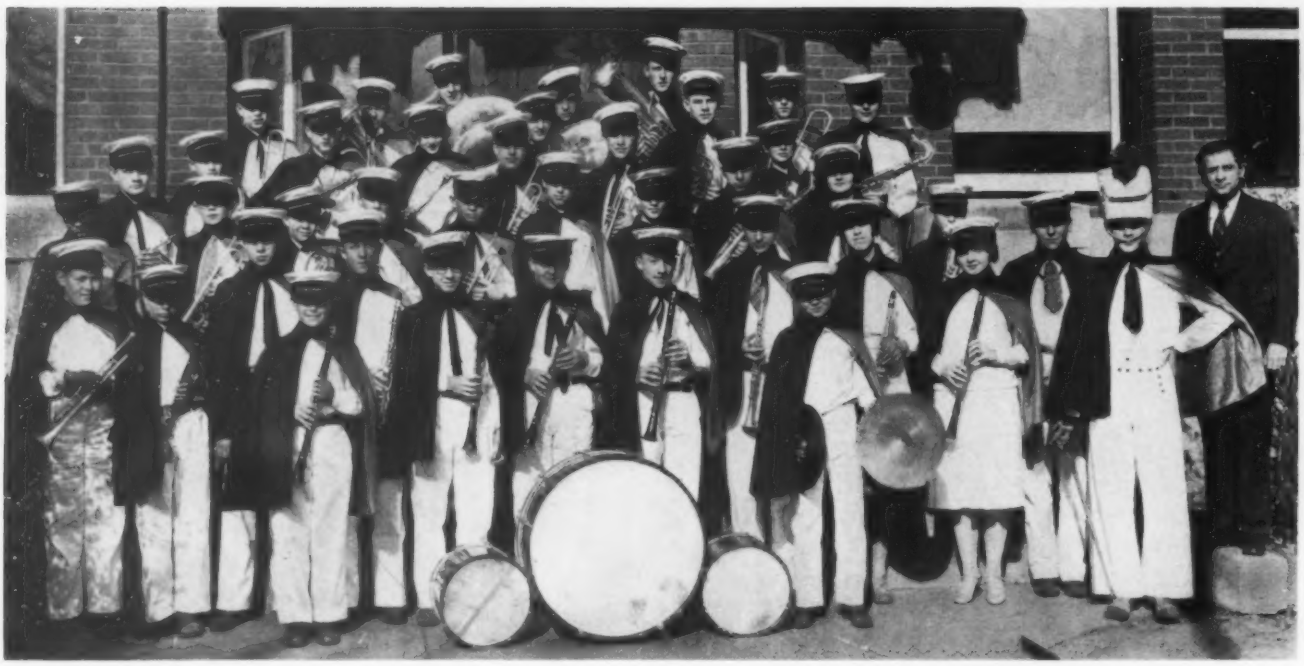
Independent School District decided: "If extra-curricular activities are worth while and serve the purposes that are claimed for them, participation in a limited number of these activities should be required from all pupils for graduation from high school." That group of men passed a resolution requiring at least one unit of extra-curricular credit for graduation from high school, in addition to the sixteen solid units ordinarily required. Further, they made one or more extra-curricular activities compulsory for all sophomores. This brought the pupil into extra-curricular activities during his first year in the senior high school which in most instances meant the continuance of some activity participation through the remaining years of high school. Since the plan was inaugurated, more than 95 per cent of the student group has participated in one or more extra-curricular activities each year.

After extra-curricular activity participation was made compulsory, it became necessary to develop a plan for evaluating credit for participation. After four years of trial and experimentation, a weighted point system was evolved by the student council cooperating with a faculty committee of which the high school principal served as chairman.

It was found that some of the more popular leaders, not always the most capable pupils, were devoting more than a fair share of their time to extra-curricular activities, at the expense of their curricular subjects. A limitation plan, shown here, was completed by the same group that developed the weighted point plan for the activities.

When the program had been conducted for several years on an after school basis, it became evident that the best results were not being obtained under this plan. The chief disadvantages were: The activities did not receive the attention and emphasis they should receive for the regular credit that was to be given for participation in them; some teachers when given an activity to be carried on after school hours, considered it an

Glee clubs are important factors in the extra-curricular organizations.



Splendid musical organizations have been developed during assigned class periods.

"extra activity" and did not give it the time or interest it deserved; a few of the activities required after dinner work which deprived the pupil of evening study hours and made a plausible excuse for the pupil to be absent from home evenings; many of the working pupils were prevented from participating in activities and the opportunities of participation were given only to those with leisure time after school hours.

The board of education in 1927, in an effort to eradicate these difficulties, decided that whenever possible extra-curricular activities should operate on a regular school time basis, with the teacher given an extra-curricular assignment as one-fifth of her teaching load.

After three years under this plan, the following advantages have been found: Extra-curricular participation can be made compulsory; more pupils participate in the activities; the teacher considers extra-curricular work a part of her regular teaching job and makes special preparation for it; the response and enthusiasm of the pupils are increased; pupils consider the extra-curricular program a part of the regular school program and

TYPICAL SCHOOL TIME PROGRAM FOR THE FALL SEMESTER

	I	II	III	IV	V	VI
Mr. H.	Orchestra M.W.F. Band T.Th.					
Miss R.			*Glee Club* Boys W. F. Girls T. Th. Mixed Chorus M.			
Mr. R.						Football
Mr. A.		Boxing				Golf
Mr. M.						Tennis
Mr. N.						Intra-mural Basket Ball
Mr. C.		Debate				
Miss E.			Dramatics Play Practice			
Mr. C.				Journalism		
Miss S.						Girls' Ath.
Miss G.					Declamation	
Mr. K.						Intra-mural Football

COMPLETE LIMITATION

The limitation of extra curriculum activities will depend upon the grade average.

A student with an A average may carry 3 majors.

A student with a B average may carry 2 majors, 1 minor.

A student with a C average may carry 2 majors.

A student with a D average may carry 1 major, 1 minor.

A student with a D average with 1 F may carry 1 major.

A student with 2 F's may carry 1 minor.

A student with more than 2 F's is not allowed to carry extra work except the 17th unit needed to graduate.

(2 minors equal 1 major.)

Majors:

1 Football, basket ball, track.
2 Class and club presidents.
3 Officers of study halls.
4 Glee club.
5 Student cabinet.
6 School representative in declamatory or debate.
7 District music contest.
8 Band
9 Plays and operettas.
10 Fifth subject.
11 15 hours or more of outside work or school help per week.
12 Arrow: Editor-in-chief, senior, junior and literary editors, business manager.
13 Blue and Gold—member of staff.
14 Orchestra

Minors:

1 Tennis, golf.
2 Class and club officers [except president].
3 Student council.
4 Committees.
5 Home room officers.
6 Intra-mural basket ball.
7 Hall monitors.
8 Outside music.
9 Bible study.
10 Class representative in declamatory and debate.
11 Gym.
12 Cheer leader.

No student may hold two offices.

do not overindulge in the activities; the plan becomes self-limiting.

A typical school time program for the fall semester is illustrated here.

A problem of finances confronts every high school that is concerned with an extra-curricular program. Aberdeen finances its program thus:

1. The board of education appropriates $1,000 each year for the high school extra-curricular program.

2. An activity ticket is sold to each high school pupil for $3.50. This ticket admits the pupil to all events conducted under high school auspices during the year, and entitles him to a year's subscription to the high school paper. Pupils may purchase these tickets by making a deposit of $1 and signing a note for the balance. The note aids in teaching the pupil purchasers lessons in promptness, honesty and business ethics. At the same time it increases the ticket sales. Losses through the nonpayment of notes are negligible.

3. Special admission tickets are sold to the general public for all special events conducted in athletics, dramatics, debate and musicals.

The principal and a committee composed of the faculty chairmen of the various activities constitute a budget committee to formulate a budget for each year's activity. A typical budget follows:

Estimated Receipts

Board of education	$1,000
Sale of activity tickets	2,500
Sale of general admission tickets	5,000
Total	$8,500

Estimated Expenditures

Basket ball	$1,750
Football	2,500
Track	500
Golf	100
Tennis	50
Girls' athletics	100
Blue and Gold (high school paper)	1,400
Debate	250
Declamation	250
Keystone honorary	50
Pep club	200
Music	500
Student council	100
General fund (surplus for emergencies)	300
Miscellaneous	250
Total	$8,500

It will be observed that all revenues are placed in a common general fund and distributed from this source, not on the basis of the receipts from each activity but upon the basis of carrying on all the activities effectively and efficiently.

The books are kept by the advanced bookkeeping class in the commercial department. All checks are drawn through the high school principal. Statements are issued each month to the chairman of each activity and to anyone else who may be interested.

The books are audited three times yearly by a special auditing committee appointed by the superintendent. This committee is composed of members outside of the regular high school staff.

Why the I. Q. Needs a New and More Descriptive Name

Since the I. Q. is only a partial measure of intelligence, it is here suggested that a less sweeping term, such as Academic Aptitude Quotient, be adopted

By SAMUEL ENGLE BURR, Superintendent of Schools, Glendale, Ohio

THE so-called I. Q. is one of the most completely misunderstood measurements with which the teacher has to deal. To many persons it represents a mysterious something derived by a subtle method of semi-occult hocus-pocus in order to secure a designation or label for a pupil. This label is to be strung about the hapless individual's neck, and forever after it is to be regarded as the only true and recognized index of that person's native abilities. It becomes the very essence of the pupil's chances for success.

Such an interpretation of the I. Q. is narrow, mean and wholly unscientific, yet it is aided and abetted by the name, "Intelligence Quotient," which we commonly use. This term is throughly misleading and should be replaced in our educational literature by a more limited term which actually reflects the real nature of this useful measurement—useful when its very definite limitations are understood.

The usual and generally accepted name, "Intelligence Quotient," is derived from tests that are almost entirely dependent upon the three R's; yet the result is applied to intelligence in the fields of art, literature, science, manual training, music and even physical education. We try to apply the I. Q. to the mastery of specific knowledges and skills, to the gaining of appreciations and attitudes, to the forming of habits and ideals.

Interpretation Is at Fault

How often have we heard our fellow teachers say, "Jack has a low I. Q.—give him a course in the wood shop," or else we have heard this, "I can't understand Ruth. She has a high I. Q. and yet she has absolutely no appreciation of what honesty and truthfulness are." The tragedy of it is that these teachers know that ability to do manual work played absolutely no part in the test that disclosed Jack's low I. Q., and that an appreciation of honesty played no part in the test that gave Ruth a high rating.

Because of this overemphasis upon the inclusiveness and value of the I. Q., we have been forced to complain about the inaccuracies of group intelligence tests. We have been so shortsighted that we have not realized where the real inaccuracy lay—the trouble has been in our interpretation of the test results and not in the tests themselves. It has been with our notion of this thing now known as the I. Q. quite as much as with the tests that determine it.

Only a Partial Measure

The fact of the matter is that the I. Q. is a partial measure of intelligence and a rather bungling inaccurate measure at that. It is usually determined by the use of tests that are not general in nature. The tests are made up of many units or parts, but in almost all cases the parts depend upon the use of oral language, the use of written language (reading) and with certain tests of memory or of manipulation involving the use of letters, words, numbers or diagrams. Consequently the ordinary "group intelligence test" determines the quality of a person's intelligence in only these special limited fields. It makes no pretense to test the full range of all the intelligence.

Experiment after experiment has shown that the I. Q. correlates most closely with accomplishment in the following subjects: vocabulary, reading, spelling and arithmetic in the elementary grades, and Latin, English composition and higher mathematics in the secondary schools. Many tabulations have shown a noticeable lack of correlation between the I. Q. and accomplishment in music, the fine arts, the industrial arts and physical education.

Nothing more than common sense should be needed to see why this is true. The tests are

based upon the use of those subjects with which the correlation runs high. Because of the materials and devices now used in its determination, the I. Q. will always compare more favorably with accomplishment in oral or written language than with the knack of making money or with the ability to make friends with strangers.

Limitations Must Be Acknowledged

In plain reality the so-called "General Intelligence Test" is no more or less than an aptitude test in a certain limited field—and not an absolutely accurate test of aptitude in that field. Moreover, the exact field covered differs a little for every different test. No two of them test exactly the same elements of intelligence or phases of aptitude. To be exact, the "General Intelligence Test" is a measure of a pupil's chance to succeed with the more formal types of school work as such work is now being presented in most schools. Consequently, we find that the child with a high I. Q. succeeds with Latin, algebra and English composition, because these are ordinarily presented in a formal manner only. In like manner, the child with a low I. Q. does not succeed with these same subjects.

It is not true, however, that other things do not involve intelligence. The appreciation of fine art, the ability to harness an electric motor, the ability to save money, the ability to make friends with strangers—all of these require a certain intelligence, but each one requires a different type of intelligence and none of them requires the type most completely measured by our present intelligence tests, although a high I. Q. may be of assistance in doing any one of these things.

Why Intelligence Tests Are Criticized

We still hear persons criticizing intelligence tests and ruling out the I. Q. Invariably, they do not understand what the I. Q. is or appreciate its acknowledged limitations. Just as soon as we recognize the fact that the I. Q. is a measure of only certain phases or elements in a person's total range of intelligence, we can make proper use of it. Just as soon as we realize that the I. Q., other factors being equal, should indicate ability to accomplish the more formal or academic things in school work as it is offered to-day, we can expect unjustified criticism to be discontinued.

Perhaps such a realization cannot come while we continue to use that misnomer, the "I. Q.", to label our result. Would it not be far better to rename this measure of ability an "Academic Ability Quotient," which is what it really is. This term would be much more nearly true than our present misinterpreted and misunderstood I. Q. If such a change of name could be made, the tests that make it possible to compute the I. Q. would need new names also. No longer should they be allowed to masquerade as general intelligence tests—they are not general—they measure only certain phases of intelligence. They could be called academic aptitude tests and be much better named.

There should also be a new name for our so-called "Mental Age." This is just as warped or skewed a result as is the I. Q. It does represent mental age of a sort, but of one sort only. Again, it is a measure of only the formal, academic type of mentality. Our present M. A.'s are grossly unfair when applied to the artist or to the artisan. How much more nearly correct we would be if we were to speak of a person's academic ability age or level rather than of his M. A.

It is recommended, then, that we rename our General Intelligence Tests and the M. A.'s and I. Q.'s derived from them, using terms more limited in scope, more truly descriptive of the boundaries within which they really fall. For General Intelligence Tests it is suggested that Academic Aptitude Tests be substituted; for Intelligence Quotient (I. Q.), Academic Aptitude Quotient (A. A. Q.) and for Mental Age (M. A.), Academic Aptitude Age (A. A. A.).

Free University Is Sought in Massachusetts

Establishment of the University of Massachusetts as a state college to provide entirely free education for residents of the commonwealth is proposed in an initiative legislative petition which has been certified by the Attorney General, Joseph E. Warner, as being in proper form, according to announcement by Mr. Warner.

The petition was presented by a number of residents of Boston and Chelsea and would "provide the inhabitants of the commonwealth with the means and opportunity of obtaining general and professional education of a high grade entirely free of charge for tuition, books, paper, materials or supplies."

The proposed institution, which would be coeducational, would be authorized to confer degrees and grant such diplomas as are customarily conferred in a university. It would be headed by a board of seven regents to be appointed by the governor at a salary of $5,000 each.

A residence of four years in the state would be a requisite for entrance. The college would be constructed and the first class enrolled one year after the passage of the act.

In the lobby may be seen a silhouette of Samuel Phillips, founder of the academy, and an early American highboy and table.

For Phillips Academy A Colonial

THE "stone shell of a building" with its wooden addition that was used from 1893 to 1929 by the trustees of Phillips Academy, Andover, Mass., as a hotel, has been supplanted by a palatial new fireproof Georgian colonial building of brick and stone, built on the old Stowe house site on Chapel avenue. The hotel was opened recently under the old name of the Phillips Inn. The new inn, built by friends and graduates of the school and controlled by the trustees, is a Phillips Academy institution, intended mainly for the convenience of visitors. While it is hardly large enough to accommodate all the graduates at once, it is sufficiently commodious to meet ordinary emergencies, and its dining rooms are capable of expansion in time of need.

The setting under the old elms with the view over Rabbit's Pond in the foreground to Lawrence and the distant mountains beyond is one of great beauty and, with the completion of the landscaping of the grounds, it will become a harmonious part of the campus.

The pillared portico gives a feeling of hospitality, which is confirmed by the spacious lounge that occupies the entire ground floor of the main building. A fireplace with a Peale portrait of George Washington in the panel above is directly opposite the entrance door. The floor of wide boards of quartered oak is the only wooden floor in the entire building, all the others being of cement. Oriental rugs, old maple tables and deep wing chairs and sofas give an atmosphere of comfort. The clerk's office is at the right and a writing room furnished in amethyst and blue is at the left of

One of the private rooms of the inn, pictured here, has one side of pine paneling and is furnished in eighteenth century pieces.

Alumni and Visitors—Welcome

the corridor leading to the east wing. A handsome escritoire lends distinction to the latter room.

The beautiful and dignified parlor is on the ground floor of the east wing. The wainscoting and a dentelated cornice might look to the uninitiated like the work of Samuel McIntire, but they are in reality made of plaster to conform to the fireproof construction of the building.

The restful gray wall paper was especially imported from Alsace-Lorraine and is a satisfactory background for the old steel engravings.

Over the fireplace hangs a portrait of Martha Washington also by Peale. An interesting touch on the mantel is a pair of green vases with ivy, repeating the green of the overhangings and the carpet. Much of the furniture is from the Mabel Brady Garvan collection of the Institute of American Arts and Crafts, Yale University. Other pieces are copies of interesting early American pieces. A Heppelwhite card table is at either end of the room over one of which hangs a reproduction of a mirror in the Metropolitan Museum in New York. A Duncan Phyfe table stands near the fireplace.

A silhouette of Samuel Phillips, founder of Phillips Academy, hangs in the main lounge. It was presented to the school by the Misses Brooks of North Andover, Mass., descendants of the Phillips family. The fine portraits of George and Martha Washington also belong to Phillips Academy. The portrait of George is a copy made by Rembrandt Peale in 1856 of the original he had done in 1795. The one of Martha he copied at the same time from an original by Charles Wilson Peale. They

The spacious lounge occupies the entire ground floor of the main section of the building. Over the fireplace hangs a portrait of George Washington painted by Rembrandt Peale. Oriental rugs, two gate-leg tables that are early American originals, deep, wing chairs and sofas give an atmosphere of comfort and dignity.

Comfortable Interiors

At either end of both the second and the third floors is a suite consisting of bedroom, sitting room and bath. One of the pine paneled private sitting rooms is pictured above. A corner of the beautiful and dignified parlor is shown at the right. The portrait of Martha Washington over the fireplace was copied by Rembrandt Peale from the original by Charles Wilson Peale. A couch that was once the property of Louisa Alcott and is now owned by the school will have a place in this room. Notes of brilliant color are introduced by the upholstery of the wing chairs in gold, green and crimson.

Phillips Inn

The new inn, which was built for the convenience of visitors to and graduates of Phillips Academy, is spacious, colorful and dignified; of Georgian colonial architecture, it fits harmoniously into the campus scheme.

The spacious dining room seats about 135. The china used is English ware in blue and white in what is known as the Mayfair pattern.

both came from the estate of Sir Daniel Gooch, Bart., Tatchbury, Mount Totten, Hampshire, England, whose mother, an American, probably brought them there from Philadelphia. They were bought from a London dealer and presented to Phillips Academy by a friend.

In the west wing is the dining room which is entered by descending a short flight of broad steps. At the left is a private dining room, the walls of which are covered with an interesting collection of hunting prints. At the right is the ladies' dressing room, which has red and green Chinese wall paper.

The crowning glory of the house is probably the dining room, with its walls paneled in water colors, its softly finished pine woodwork, its cabinets of choice Staffordshire and pewter and its chairs that follow the pattern of the early American Windsors. Overhangings of glazed chintz temper the western sunshine, and hanging lights with bronze bands and old glass table lamps provide the evening illumination. The carpet on this floor as well as the carpets in the corridors are in a hooked rug pattern. The panels, painted by D. C. Sindona, New York City, represent the early days of the Massachusetts Bay Colony with their quaint figures, their clipper ships and the stagecoach with its prancing horses that plied between Providence and Boston. Beginning with the landing of the Pilgrims at Provincetown the visitor sees in turn Dorchester Point, Foster's Hill and Windmill Point, South Battery, Fort Hill, the old South Church, King's Chapel, the old State House, Faneuil Hall and North Battery. In the alcove, the windows of which overlook the proposed garden and Rabbit's Pond, the panels are of Hartford, New London and Yale College.

The kitchen is in the end of the same wing which contains the dining room and has a complete and modern equipment.

The hotel contains forty rooms and twenty-two baths. Rooms without private baths have hot and cold running water. They are furnished with early American reproductions in maple. On both the second and third floors at either end, there is a suite of bedroom, sitting room and bath separated from the main corridor by a small hall.

The building is heated by steam and all radiators are enclosed. An up-to-date vacuum cleaning system operated by a motor in the basement provides for the cleaning of the carpets with which all the floors are covered.

Ground was broken for the building almost exactly one year ago.

This description was supplied by the *Andover Townsman.*

Appraising Rural Education's Progress During 1930

By W. H. GAUMNITZ, Specialist in Rural Education Problems, U. S. Office of Education, Washington, D. C.

This department of rural education is conducted by Helen Heffernan, chief, division of rural education, state department of education for California, Sacramento, and president, department of rural education, National Education Association.

WITH the passing of another year there is the temptation in all departments of life to take a glance backward to see if there are any evidences of progress. Business takes inventory and holds its annual stockholders' meetings, professional men make up their books and new attempts are made to relate the family budget to the family income.

This seems, therefore, to be an appropriate time to stop and review recent changes in rural education and appraise the activities and developments that have occurred in this field. Has the year seen any significant steps taken in the solving of problems that stand in the way of providing an equitable chance educationally for the rural child? Where and how are these problems being attacked? What of the future?

An attempt to appraise with any degree of accuracy and completeness all the developments in the field would obviously be impossible. Progress in the welfare of the rural schools is, in the first place, closely dependent upon the laws and regulations promulgated in the several states. There are forty-eight states and state school systems, and that means forty-eight more or less distinct lines in which progress or retrogression may occur. There are about 3,500 county or other large district school systems closely related to the welfare of the rural schools, and there are in the United States more than 200,000 local rural districts, each exercising some control over rural education.

Since progress in rural education does not go far beyond the minimum standards fixed by law and since state legislatures, with only a few exceptions, do not meet in even numbered years, it may be assumed that the year has yielded little or no measurable progress from this source. Changes in county and district school policies are so local and of such variety that it would be futile to attempt a summary. There are, however, a number of events, nationwide in scope, that seem to hold significant promise for the future of the rural schools. It is the purpose of this article briefly to call attention to these and to point out the particular aspects of rural education to which these developments of the year may contribute.

One of the most encouraging developments is the emphasis given last year to the status of rural education by the National Education Association. Willis A. Sutton, president of the association, has repeatedly expressed his interest in this greatly neglected segment of our American school system. His leadership has already effected increased activity in the rural field on the part of the several agencies of the association. Articles have recently been published in the *Journal of the National Education Association* emphasizing the need of more attention being given to rural schools. The research division of the association is planning a study of the general problem of rural school education, and plans are under way for discussion of the whole matter of rural education by the various conferences of the association during 1931. If Mr. Sutton succeeds in arousing the interest of the N.E.A. in the problem of educating rural children and if this interest becomes proportionate to the number, the significance and the difficulty of the problems involved, this achievement alone will be a contribution worthy of his high office.

Another development that should eventuate in

progress in rural education is the interest in this field exhibited during the year by the National Society for the Study of Education. One volume of the thirtieth year book of this society has been devoted to the problems involved in educating rural children. Prof. Orville G. Brim, Ohio State University, is general chairman of a committee that has studied carefully the several aspects of this field of education, has summarized the available facts pertaining to each and has brought into relief the problems that still await solution. This year book, scheduled to appear in February, 1931, should help greatly in diagnosing the educational limitations and difficulties of the rural child. The more thoroughly these limitations and difficulties become understood, the greater the likelihood of progress.

Still another development that gives promise of nationwide progress in at least one phase of rural education is the National Survey of Secondary Education. This survey is now in the second year of a three-year program. One of its major purposes is to study thoroughly the problem of placing an acceptable quality of high school education within reach of the rural child. To this end an effort is being made to present as complete a picture as possible of just what the average small high school is doing in the name of secondary education and to show what can be done to improve the educational opportunities of those dependent upon these small secondary schools. Prof. E. N. Ferriss, Cornell University, and myself have charge of the two sections of the survey that deal particularly with high school education in rural and small population centers.

Survey to Reveal Teachers' Qualifications

The National Survey of the Education of Teachers should also be cited as one of the developments within the past year that tend toward progress in rural education on a nationwide scale. This survey was launched on July 1, 1930, and is to extend over a period of three years. As a result of this study it will be possible to learn just how much preparation the teachers of the several types of rural schools have had, where this preparation was secured, what is its character and a great many other pertinent facts that we have needed in the past. The survey will study particularly the problems of teacher supply and demand. Just what the survey will do toward solving the instructional problems of the rural schools has not as yet been determined. But finding the exact status of the teacher situation in the various types of communities should do much to center attention upon the rural school and this in turn should tend toward progress. Dr. William John Cooper, U. S. commissioner of education, is the director of this survey and Prof. E. S. Evenden, Teachers College, Columbia University, has direct charge of the work.

Another line of nationwide activity from which improvements should result to rural education are the White House Conferences on Child Health and Protection. Committees connected with these conferences have made extensive inquiries into rural child health and provisions for the education of rural atypical and problem children and for the conservation and guidance of rural child life in general.

What States Require of Teachers

A series of circumstances have resulted in a nationwide oversupply of persons who, under the laws and regulations now governing the certification of teachers in the various states, are available for teaching positions. This is therefore an opportune time to raise, strengthen and improve the training requirements for certification. Since changes in the qualifications of rural teachers are so largely dependent upon state requirements, revision upward in the requirements is particularly important to the rural schools. A number of the states have recently enacted laws or promulgated regulations requiring longer periods of teacher training which, in a few states, have become effective within the past year. So far as the facts could be ascertained the following roughly summarizes the minimum training periods fixed by recent enactments:

With the year 1930 California went on a four-year basis for state certificates. The individual counties of this state, however, still grant teaching certificates to candidates for teaching positions without regard to the length of their training period, except that they must be high school graduates. A number of persons (192 in 1929), therefore, still enter the profession with less than four years of training. But four years is the goal fixed by the state, and it is to be expected that steps will soon be taken to bring the training of all teachers to this standard.

Fully five states have, either by law or by regulation, fixed three years as the minimum training period required of all who enter the field of teaching. In some of these states this standard did not become fully effective last year, but definite programs are being followed which look toward the achievement of this standard within the near future. State educational policies of Connecticut and Massachusetts have for some time past fixed three years as the minimum training required for teaching. According to the annual National Education Association roll call these states have generally

achieved the three-year goal. In Arizona and New Jersey this standard became effective within the year 1930 and the state of Washington will go on a three-year basis in 1933.

Nine states have fixed two years as the minimum training required for teaching. Pennsylvania and Utah have for some time had laws fixing a two-year minimum. Their laws requiring this standard were scheduled to become effective in 1927 and 1931, respectively. Idaho passed such a law in 1929 and provided that it become immediately effective. Recent provisions fix 1931 as the year for effecting a two-year minimum in Colorado and Louisiana, 1933 in Oregon and 1934 in New York State. Wyoming recently enacted a law making the two-year standard applicable to persons entering its teaching force from other states, and Indiana claims through state policy to have raised the entrance standard to two years. According to reliable reports New Hampshire and Vermont should also be placed among the states requiring two years of training, but these reports could not be definitely checked.

How Standards Affect Rural Teachers

One year of training as a minimum requirement for teaching has for some time past been in effect in Michigan, Ohio and Wisconsin. Illinois and Minnesota fixed this standard to become effective in 1930 and 1931, respectively. Wyoming has also set a minimum training period of one year for all its teachers by 1931. Other states not listed above have improved their teacher training standards, but the changes vary greatly and are therefore difficult to summarize.

In justice it should be stated here that the certification practices of some of the states are still far below the levels fixed by the standards cited. Conditioning factors of many kinds are responsible for wide disparities between the declared standards and the actual practices. Rural schools are the last to profit from an upward revision of certification standards. Officers of these schools are apt to demand cheap teachers, often at the expense of qualifications; emergency regulations are frequently allowed to circumvent certification provisions; laws are not made retro-active, and a great many other difficulties are encountered. It may therefore be said of some of the states that the certification standards cited represent the goal toward which they are striving rather than actual achievements.

A study is now being made by Frank W. Hubbard of the headquarters staff of the National Education Association to determine what state departments of education are doing and to suggest what they can and ought to do concerning the vital problem of the supply of and demand for teachers. As the educational leaders of the several states learn more fully just how many teachers there are with various types and amounts of preparation and what the relationship of this supply is to the teaching positions available, they will have a more intelligent basis for improving teacher training programs and upgrading certification requirements. Since the status of the rural teacher is closely related to minimum standards, Mr. Hubbard's study should tend toward significant progress in the rural schools. In a number of states intensive studies of this problem have either been recently completed or are now in progress. The following may be cited as outstanding examples of such states: Ohio, Iowa, North Dakota, North Carolina, California and Colorado.

The County Library as a Stimulus

Increased impetus was given during the year to the county library movement. A recent check shows that the number of counties employing this method of making library facilities available to the rural child is increasing rapidly. According to this study[1] 58 counties provided county library service in 1924, 65 in 1925, 68 in 1926, 76 in 1927 and 89 in 1928. The number of counties employing this plan has therefore increased more than 50 per cent during the four-year period. By far the most of this progress was made within the last two years of the period. In 1929 the Julius Rosenwald Fund inaugurated a policy of establishing two county libraries in each of the Southern states. The action of this organization should greatly stimulate the county library movement. From the developments cited, it is fair to assume that considerable progress has been made during the year in improving the library service of rural schools.

What Surveys Show

A few other developments more local in character should also be noted in this resumé of rural school progress within the past year. A survey showing the status of schools in the state of Missouri during the school year ending June 20, 1929, has just been completed. Each section of this survey considered the rural schools. Particular emphasis was given to cost problems and to the development of a more equitable scheme of administrating and financing a statewide educational program.

Iowa and Pennsylvania have also made extensive studies during the year of the whole problem of financing their schools. The tendency in school financial policy in recent years has been

[1]Lathrop, Edith A., County Library Service to Rural Schools, Washington, Government Printing Office, 1930, Office of Education Bulletin, 1931, No. 20.

to increase the proportion of school revenue from state sources, many states having put into operation far-reaching programs for equalizing the funds available in the local school districts. It may be safely assumed that recommendations in keeping with these tendencies will be an outcome of each of the surveys named. Since the rural school districts are commonly found to be in greatest need of equalization funds, these surveys should result in improving the status of rural education in these states. Iowa is also conducting an intensive study into its rural teacher situation, and South Dakota is engaged in curriculum reorganizations. Vermont has for the last year been engaged in a survey of rural life, a large section of which is naturally concerned with the rural schools.

The Radio and Rural Education

A resumé of developments that either mark or promise progress in the improvement of rural education must of necessity recognize the few but important experiments that have been and are being conducted in radio education. For several years educators have felt that the difficult and multifarious labors of the rural teacher could with profit be supplemented by means of the radio.

The past year has seen experiments made in the use of the radio in rural schools, especially in three places. Under the general direction of Dr. Fannie Dunn, Teachers College, Columbia University, Margaret Harrison has been conducting an experiment in which a large number of the rural schools in the vicinity of New York City have participated, one four-teacher consolidated school and three one-teacher schools serving particularly for close study. The Ohio School of the Air is broadcasting school programs regularly, and large numbers of rural schools are listening in and using these programs as a means of supplementing instruction. The third experiment, reported from the University of Wisconsin, is regarded by many as the most scientific study made thus far with a view of ascertaining the value of radio education in rural schools. The radio research commission of the university has arranged a program of instruction in current events and in music. The county superintendent of Dane County selected twenty-five experimental schools and an equal number of control schools. Definite tests were given to the rural children involved to ascertain the results of this form of instruction. The schools in which the instruction was supplemented by radio showed considerable progress.

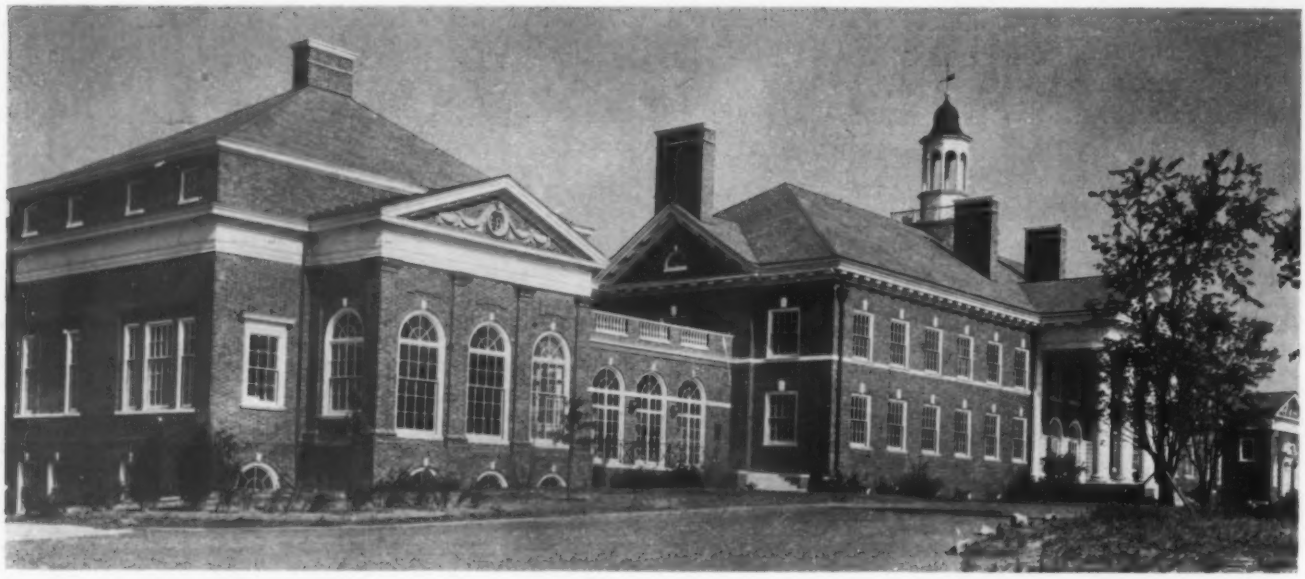
The developments and activities that have been mentioned summarize in general the progress in rural education either achieved or foreshadowed by events that have transpired during the past year. Many other developments and achievements could no doubt be mentioned for the individual states, but complete information is not available and if it were available it would not readily lend itself to summary.

How the Schools of To-morrow Will Surpass Those of To-day

A national survey recently conducted under the auspices of the N.E.A. asserts that the opportunity for education is not equal throughout the United States and that in many sections children are handicapped greatly by improper and inadequate facilities. "The rural child, generally speaking, has a shorter school term, a less thoroughly trained teacher, an incomparably more meager school equipment, than the city child," the report says. "Some communities make excellent provision for the education of their children; others unwillingly meet the bare legal minimum requirements." Substantial progress is being made to equalize conditions and "the schools of to-morrow will be administered and financed in such a way as to eradicate these differences in opportunity."

Here are some of the definite predictions concerning the schools of to-morrow: (1) They will make an earlier start to reach children before they attain six years of age. Adoption of nursery schools as a part of the public school system is expanding rapidly. (2) They will keep their doors open longer, to give year round service. The average school year increased from 130.3 days in 1880 to 171.5 days in 1928. Some states, however, still have terms of about the 1900 level of 145 days. New Jersey, which now offers 188 days of school a year, provides as much schooling in nine years as South Carolina, with a 146-day annual term, does in eleven and one-half years. (3) They will protect the entire period of childhood and will decrease child labor. During 1927-28 the survey disclosed that approximately 2,000,000 children of school age were not in school. (4) They will lift the teaching profession to a higher plane. Training will become more scientific and standards of selection more rigid. Salaries will be higher and teachers will obtain greater security of tenure and greater opportunities for research. (5) They will offer equal opportunities for all children. Accidents of birth and residence will not be permitted to handicap the life of a child from the start.

The survey asserts that children nowadays look forward to their school attendance, and unlike twenty years ago, do not dread public schools.



Where Architectural Beauty and Utility Are Combined

Mary Institute, St. Louis, a country day school, follows the lines of buildings of Thomas Jefferson's day, thus carrying on the American tradition and providing a background of beauty for its pupils

By GUY STUDY, Study and Farrar, Architects, St. Louis

THE new building for Mary Institute, St. Louis, will undoubtedly be considered a model in country day school planning, as it includes all modern conveniences now in use in schools, combined with utility and marked architectural beauty.

Two principal problems, neither of which can be subordinated to the other, always face every architect when he plans a building of this type. One is the practical working arrangement of the plant, without which any building would be useless and the second is the artistic beauty obtained by means of the architecture, without which a school building of this type is wholly inadequate.

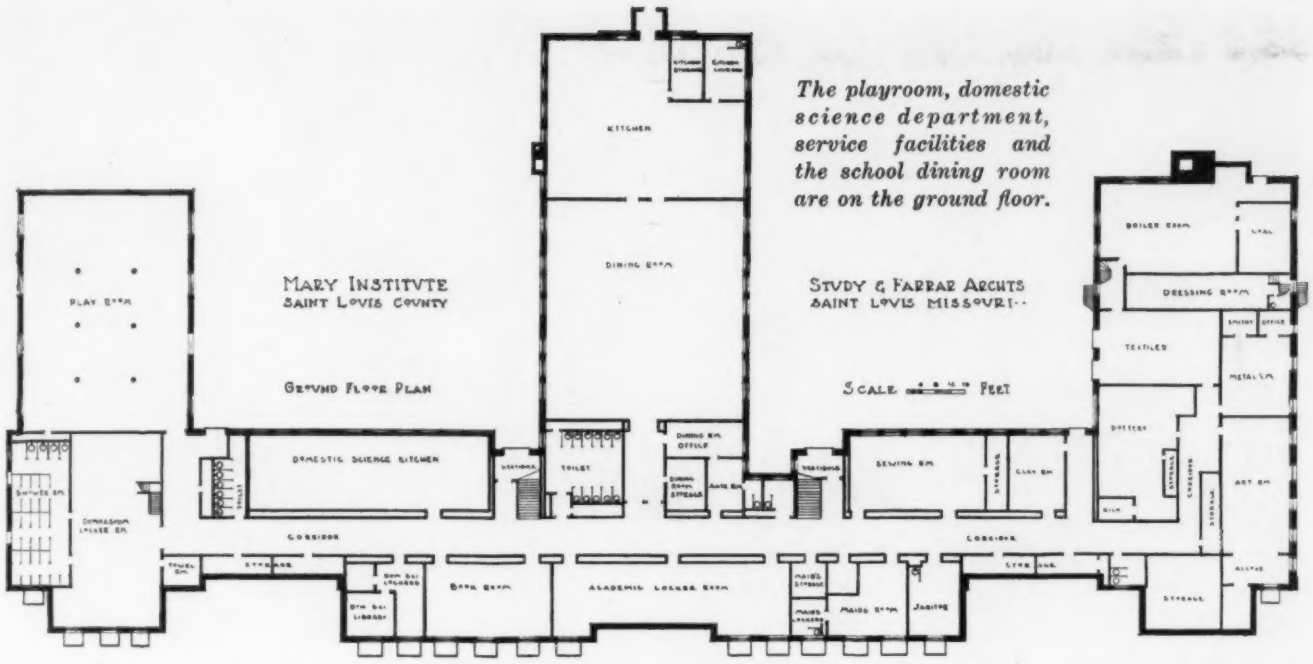
Mary Institute is situated in beautiful rolling country about four miles from the city limits of St. Louis, within easy reach of bus and other transportation facilities. The academic building, Wilson Hall, the main building of the school, is set far back from the main highway in a beautiful partly wooded campus. Wide winding drives lead to the building and to the principal's house, which is also part of the whole scheme.

The plan of Mary Institute is simple and direct, as may be said of all well planned buildings. The school includes three buildings, a central academic hall flanked by two smaller buildings connected by arched passages. The central academic hall has an imposing entrance reached through a portico of columns.

On the first floor are the administration offices and the primary and preparatory departments, the second floor being given over entirely to the upper classes. In one of the flanking pavilions is a beautiful auditorium and in the other a kindergarten and gymnasium.

Why School Was Moved to Country

Mary Institute was founded in 1853. The school has always had a fine reputation, and has a record for sending many of its pupils to Eastern colleges. For the past twenty years, it has been housed in a building within the heart of St. Louis, but in recent years, in order to comply with the modern trend of education, the need has been felt for the advantages of the so-called country day school.

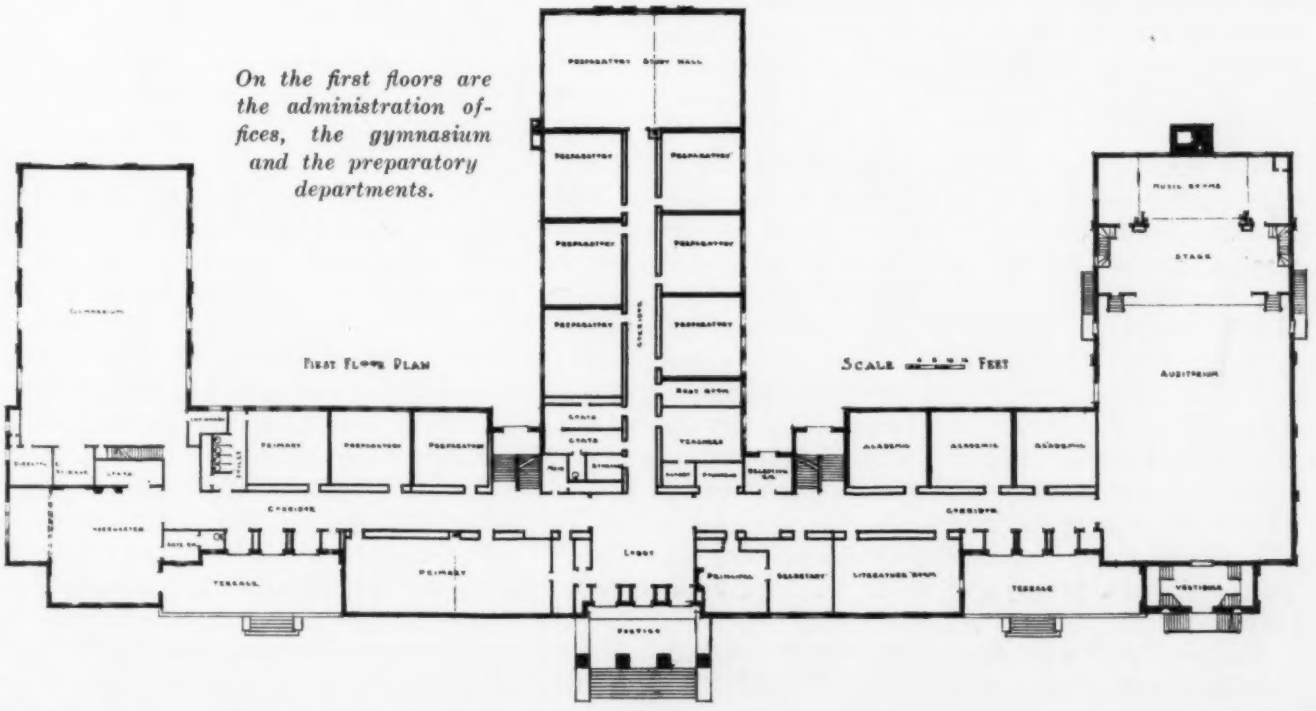


The playroom, domestic science department, service facilities and the school dining room are on the ground floor.

With remarkable generosity, an alumnus of the institution, Mrs. Newton R. Wilson, came forward with the proposal to provide the funds for the land and for an entire new building, as a gift to her alma mater.

Before even tentative plans were considered, the architects selected to design the plant were requested to visit and study the leading schools of this type throughout the country. After consideration of all the different types of architecture that exist in our American colleges, the Georgian or colonial style was selected as best fitted for the purpose. The architecture of Thomas Jefferson's day, which reached such beautiful perfection at Charlottesville, Va., has been almost the sole source of inspiration for the designers of the new Mary Institute.

In speaking of the building, one of the architects said, "In my judgment, the most difficult thing in school designing is to obtain the proper American character and atmosphere for the whole building. This is more a matter of architectural design, taste and judgment than it is of school planning. The architect should try to obtain the form that will have the most desirable effect upon impressionable youth, especially, in a school of this type. We selected the colonial style because it is simple, the building being largely of brick with



On the first floors are the administration offices, the gymnasium and the preparatory departments.

The main entrance hall of the new Mary Institute, with its white paneled walls and floor of black and white, is marked by an air of quiet dignity.

wooden window frames and wooden cornices. These are the materials that have made up most of our homes. In the surroundings of the new Mary Institute a pupil could not feel that there had been any extravagance in the use of materials."

Mary Institute is so planned that every portion of the building receives a maximum amount of light and air. Departments of the school that create noise and disturbance, such as the gymnasium, the playrooms, the kindergarten and the auditorium, have been placed in the separate or flanking wings.

The quality and spirit of this design have been obtained not only by means of the large formal motifs of the style of the architecture but likewise by the selection of materials and details.

Floor and Wall Treatment Is Interesting

The corridor and classroom floors throughout the building are of herringbone oak strips, laid directly on the concrete slabs by means of hot mastic, thus producing a rich looking and at the same time noiseless floor. The formal walls of the paneled vestibules, administration offices and the auditorium are painted white. Those of the classrooms are all painted French gray, with walnut doors, thus eliminating to a marked degree the drab, uninteresting character of the average classroom. Throughout the building interesting details may be noted in cases, star railings and fireplaces and wherever any architectural design may be employed, thus giving the whole building additional charm.

The brickwork and stone treatment of the exterior have been given the same careful study.

The school was planned to house 600 pupils. The building alone, equipped, cost approximately $600,000, not including the grounds, athletic fields and landscape work. Mrs. Wilson's original gift consisted of about seventeen acres of land on which are the school, two hockey fields and the principal's house. Twenty additional and adjoining acres were recently acquired by the school for athletic fields and playgrounds.

State Superintendent Issues Book on the Preschool Child

C. N. Jensen, superintendent of public instruction for Utah, has issued a manual on the problem of the preschool child. The attempt is made to contribute practical information to parents and teachers enabling them to guide wisely the growth and development of the child during the first five years of life. Standards are set up to enable mothers to measure normal development of the child. Suggestions for guidance in this development and lists of suggested equipment for assistance in its attainment are given. Authoritative discussions of child problems in lay terms are given. Topics treated in detail are: eating, sleeping, truth, fear, temper tantrums, thumb sucking and nail biting, punishment, discipline, consideration for others, music and play. The appendix includes an extended bibliography. The bulletin aims to penetrate the home to ensure the normal or optimal development of greater numbers of children.

How Certification Is Practiced in the Various States

This study shows that the granting of teacher certificates is passing out of the hands of local and county officials and is being vested in state departments

By JOHN J. DYNES, Department of Education, University of Wisconsin

PROGRESS in raising educational standards in the United States has been influenced by progressive administration.

During the past few years there has been a surplus of teachers in certain localities because many teachers who had withdrawn from the profession during the war were anxious to return to it and because persons of ability and training were attracted to teaching on account of the increased salaries and generally improved conditions.

It was generally recognized that while teachers' salaries were materially increased as a result of the war situation, scholarship and personality qualifications had deteriorated. This was caused in part by the selection of the better teachers to fill government positions, the vacancies thus created in the schools being filled by young persons who were not educated or trained for teaching. An effective method for raising standards and one that could be applied generally was recognized as being the enactment of state laws and regulations governing the issuance of teaching certificates.

The Development of Certification

Teacher certification was originally conceded to be a local responsibility in nearly all states. The school board or committee gave the examinations, passed on the qualifications of the candidate and issued the certificate. It is now generally considered a state responsibility. A few states established state centralization of certificating powers with territorial organization. Other states have recently reached this period of development after unsatisfactory experience with more localized and less efficient systems. The development has been, in general, as follows: first, certificates were issued by the local district or township inspectors or examiners; second, the certificating power passed into the hands of county superintendents; third, as state departments of education were definitely established and assumed importance, more educational authority was granted them. Higher efficiency and more uniform requirements were secured under the new conditions by including among the legal duties of the state department that of granting certificates of statewide validity and that of influencing or controlling the whole matter of certificating teachers.

What Is Required of Teachers

Scholarship requirements have undergone a change also. At first the requirements were meager and indefinite. Then each state passed first to the stage in which a knowledge of the fundamentals was required; second, to requiring proficiency in the more general academic subjects, and third, to requiring a knowledge of the theory and practice of teaching. Professional preparation for teaching became more common and demands were increasing that certificates without examination be given to those taking specified courses in education and to graduates of professional schools.

The following facts are generally accepted: Every teacher must be of good moral character. A standard high school is one requiring four years of work beyond the elementary school. A standard normal school requires high school graduation for entrance and gives two years of work of college grade. A standard college is one that maintains a four-year course and requires the completion of four years of high school for entrance. Approved schools are those that meet requirements of state boards or of state departments of education. Experience, when required, is assumed to be successful experience.

Teaching certificates are issued by state, county and local authorities. In regard to the issuing of certificates we find five systems of administrative organizations. These systems of administration

have been classified as follows by Katherine M. Cook, chief, division of special problems, United States Office of Education:

1. State systems, in which all certificates are issued by state authorities and the state retains control over the whole matter of teacher certification.

2. State controlled systems, in which state and county authorities may issue certificates, but the authority governing the issue is retained by the state officials. County authorities merely issue certificates.

3. Semistate systems, in which the state exercises control but not complete control. The state makes the regulations and gives the questions for examination, but local authorities examine the papers and issue certificates.

4. State county systems, in which both state and county authorities issue some certificates and govern important regulations, formulating the questions, for example, under which they are granted.

5. State local systems, as in Massachusetts, in which full power of certification is given to the township school committee. The state department issues certificates limited in number and type.

There are two methods of assigning the authority to grant teachers' certificates and of defining the conditions under which they are granted: (1) statutory provision specifying the number of certificates, the qualifications demanded for each, the authority empowered to grant them and term validity; (2) assignment by statute of authority to formulate rules and regulations for certification to state officers without making specific provisions for details in the law itself. Generally the authority to do this is given to the state board of education or to the state department. City boards are granted this power in nearly all states, either directly or indirectly.

Uniformity in Certificates Is Lacking

There is no homogeneity among the states, either in the name of the certificates or in their significance. A knowledge of the names and provisions of certificates in one state is of little value in interpreting those of other states. A first grade certificate in one state may be the equivalent to a college diploma or life certificate in another as far as qualifications demanded for the certificate or its validity are concerned. This lack of uniformity makes it difficult to make reliable comparison of the value of certificates in the different states. The lack of uniformity for all states or the adoption of governing principles controlling the naming of certificates makes it difficult to secure a more general and fairer system of exchange or recognition of certificates among states.

Names of certificates are influenced by or are dependent upon a number of different factors. These factors are: (1) the extent of territory in which the certificate is valid, as state certificate, county certificate or local certificate; (2) the kind of school in which the certificate is valid, as kindergarten, primary, elementary or high school; (3) the subjects or field of work for which the certificate is issued, as a special certificate in music, art, home economics or administration; (4) the time for which the certificate is valid, as two years, five years, life, permanent or provisional; (5) institutions in which credentials are earned, as normal school diploma, college graduate certificate or university department of education.

How Certificates Are Designated

Many different terms are used in the various states. "Certificate" is the most common; "license," "diploma" and "permit" are also used, the last in the same sense as temporary certificate or license. Professional, standard and nonstandard, limited and unlimited certificates are terms also used. Some states use both certificate and license, referring by these terms to a different type of certificate. "Permanent" and "provisional" often refer to certificates that are alike in the qualifications exacted and in the kind of school and territory in which they are valid, but are different in duration. First, second and third grade certificates usually represent varying grades of qualifications and experience demanded, but belong in the same class as to kind of schools and territory in which they are valid.

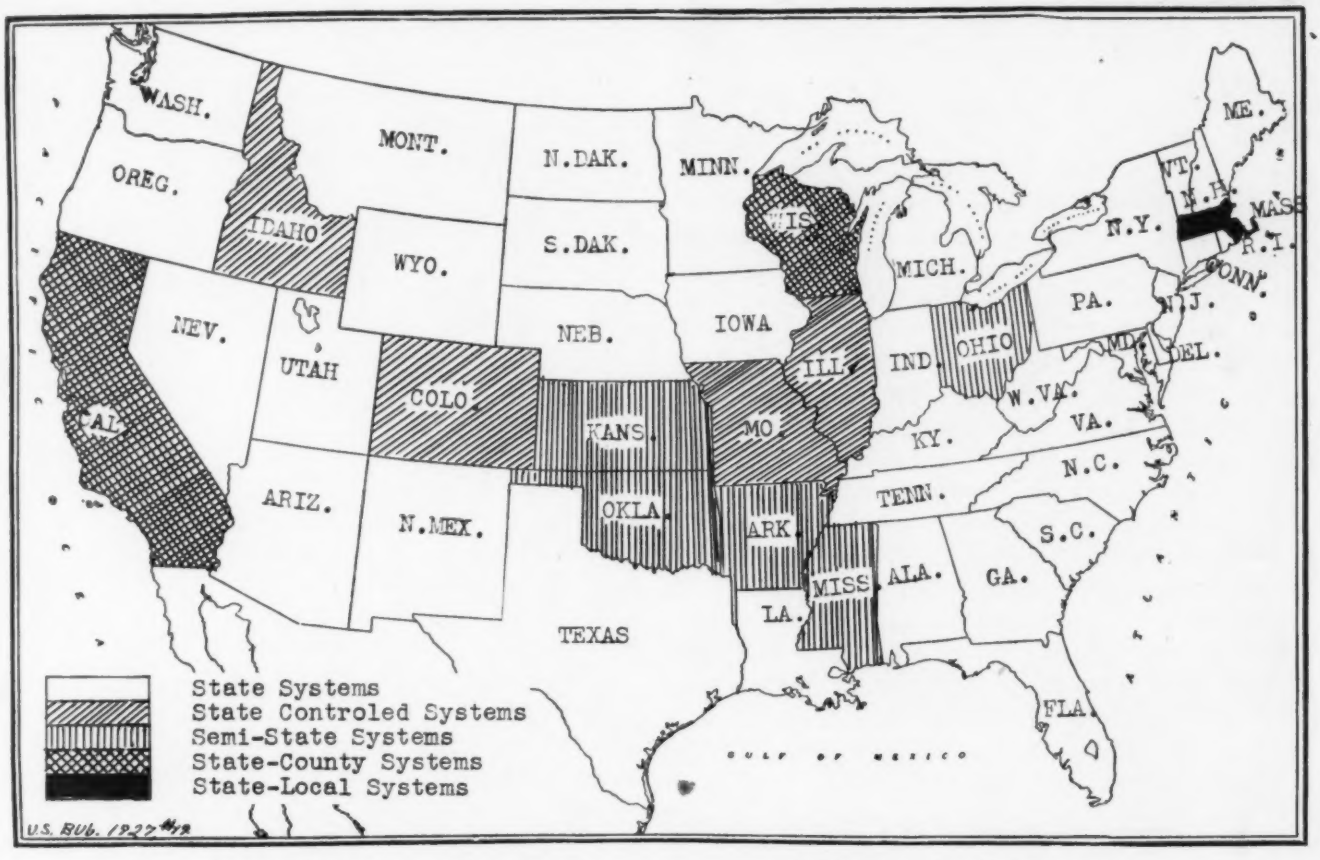
State, professional, college diploma (or degree) and normal diploma are terms used for certificates representing varying degrees of scholarship required of the state in which they are issued but representing no widespread uniformity of practice.

Certificates are classified in various ways in the different states. The most common forms of classification are as follows: (1) according to the class of schools or grade of work for which they are issued and in which they are valid, as "high school" or "supervisory"; (2) according to the degree of scholarship they express, as determined by the grades made and the number of subjects included in an examination, or by the number of years' credit or hours of academic or professional training indicated on the credentials presented, as normal school certificate or college graduate diploma; (3) a combination of scholarship and class of schools or work, such as temporary and permanent certificates for primary, elementary

and high schools, for special subjects and for supervision, or first and second grade certificates for the different grades of schools. Successful experience is an important factor in the requirements for the higher grades of certificates in most states. This is particularly true of "life" certificates.

The scholarship requirements under which certificates are granted are determined by graduation from, courses taken in or credits earned in inscribed academic and professional credits, or the examination may be the only basis upon which the certificate is issued.

A certificate is valuable to the degree that it measures the amount of scholarship and successful experience to which it certifies. The extent of territory, validity, duration and other provisions are of minor importance to school boards and superintendents to whom the certificate should give a basis for estimating the candidate's ability



Map showing different types of administrative systems that issue teachers' certificates.

stitutions of secondary grade or in normal schools, colleges and universities; by means of examinations in prescribed subjects, and through possession of lower grade certificates. Certificates granted on credentials or certified credits are usually based on: (1) graduation from standard colleges or universities and a prescribed amount of postgraduate work; (2) graduation from universities or colleges with the inclusion of certain prescribed professional courses; (3) graduation from two-year courses in colleges and normal schools; (4) completion of prescribed courses in higher institutions, including regular academic work and professional courses; (5) graduation from training courses conducted in secondary schools included in or in addition to the regular four-year secondary course. Certificates issued on examination may be issued in addition to pre-

to teach and govern a school. To the recognition of this fact is due the tendency toward setting up an increasingly higher standard of scholarship for the different certificates issued to candidates, and for the elimination of permits and the lowest grade certificates. This tendency is important to school boards and superintendents and also to the teaching profession. As long as it is easy to enter the teaching profession, it is difficult to set up high professional standards of requirements.

What Some States Do

A number of states have eliminated examinations as a method for certificating teachers, and several have perfected plans to do away with examinations within the next few years. Some states require that the students have a major and a minor teaching subject, but there is nothing that

prohibits a teacher attempting instruction in a subject for which he has had no training. Other states require that the students have a major and a minor teaching subject and issue certificates without reference to these subjects. If the teacher attempts to teach other subjects, however, the school may be taken from the accredited list. The new licensing law of some states requires that the training shall be specific and that the license shall be granted to teach only those subjects in which the applicant has had specific preparation.

Minimum Standards

To-day over half of the states require high school graduation before certificates will be granted. One year of professional work based upon graduation from high school has been set as a minimum standard of preparation in several states, although temporary or emergency certificates may still be issued in some cases. Four states have set a minimum standard of two years of normal school training or college for certificates to teach—Connecticut, Pennsylvania, Utah and Washington. California requires two and one-half years beyond high school graduation and has set the standard at three years, to be reached gradually during the next few years.

The requirements for the certification of high school teachers have also advanced. Two-thirds of the states provide for certification on the basis of training, ranging from the completion of one year to four years of college work. Twelve states require four years of college work before they will issue a license and in the future a few may require a fifth year.

Raising Teaching Standards

The minimum requirement for certification is the chief factor in setting the standard of professional preparation to be found among teachers in any state. Certification is more and more being recognized as a means of systematically and definitely raising standards of teachers and of teaching. A study of certification made in 1921[1] showed that a beginning had been made in this direction in the establishment of academic and professional prerequisites for the lowest grade certificates granted, and in the apparent tendency to centralize certificating authority in state departments of education, to draw away from the examination as the sole method of judging scholarship qualifications for teaching certificates and to exact a degree of specialization, confined, however, largely to certificates for teaching special subjects, such as music, art, agriculture, home economics and commercial subjects. Some states issue certificates to teach only those subjects in which the candidate has had specific preparation.

The movement toward the centralization of certificating authority in state officials, generally state departments of education, was well under way in 1921 and has developed since then. Following is a classification made by Katherine M. Cook,[1] in which the states are grouped according to the degree of state centralization in the administrative system established for the issuing of certificates into five groups:

1. State systems (the state issues all certificates). There are thirty-six states in this group—Alabama, Arizona, Connecticut, Delaware, Florida, Georgia, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia and Wyoming.

Eliminating Examinations

Eleven of these states have practically eliminated examination as a method of issuing certificates, in favor of credits from approved or accredited teacher training institutions. (Arizona, Indiana, Louisiana, Maryland, Michigan, New Jersey, North Carolina, Pennsylvania, Utah, Vermont, Virginia.)

2. State controlled systems (the state prescribes rules, gives questions, and examines papers; county authorities issue some certificates). The states in this group are Colorado, Idaho, Illinois and Missouri. The degree of difference between Group 1 and Group 2 is slight.

3. Semistate systems (the state makes regulations and gives questions; county authorities issue certificates and correct papers). There are five states (Arkansas, Kansas, Mississippi, Ohio and Oklahoma) in which county authorities not only issue certain types of certificates but exercise some measure of control over standards for the certificates they issue in that they are responsible for the correction or grading of papers of applicants for certificates on examination.

4. State county systems (both the state and the county issue certificates; the county retains full control over examination for one or more certificates). There are two states in this group, California and Wisconsin. County authorities formulate questions, grade papers and issue certificates, thus retaining full control over certain types of certificates issued on examination.

5. State local systems (town school committees

[1]United States Bureau of Education Bulletin 22, 1921.

[1]United States Bureau of Education Bulletin 19, 1927.

retain full authority over the certificating of teachers in their employ). Massachusetts is the only state in this group. The state also issues certificates, but their use is confined to union superintendents and teachers in state-aided high schools.

A study of the foregoing statements shows that centralization of the certificating power in state officials or in state departments has been accomplished in a large majority of the states. While county authorities still issue some certificates in a few states, the practice is gradually being given up and is now definitely regulated by state officials in all but three states. In California and Wisconsin county authorities exercise control over the issue of some certificates, while in Massachusetts the local authorities retain the power to issue certificates. In California and Wisconsin minimum scholarship prerequisites are set up by regulation of the state department of education limiting in a measure the control exercised by the county officials. The Wisconsin scholarship prerequisite may be met by completion of courses in normal training schools, under county direction but under state supervision.

A Reply to "Is the Superintendent Becoming a House Manager?"

That one Illinois superintendent feels that the superintendent is too often required to be a house manager is shown by the following letter to the editor of The NATION'S SCHOOLS:

"The editorial appearing in the February number of The NATION'S SCHOOLS, entitled, 'Is the Superintendent Becoming a House Manager?' is interesting and should be productive of thought on the part of superintendents.

"Every organization that can think up some nonsensical thing to be done (and what experts they are at that sort of thing!) will immediately seek out the superintendent. If he is strong and refuses to be the pawn of a group of well-meaning ignoramuses, then he is dubbed lazy or lacking in civic pride and civic duty. Those who want things done to glorify their own names or to help at the next political election will launch a formidable broadside of small town ammunition against him. His educational qualifications and his fine school achievements will scarcely serve as an armor. He becomes the target of every gossip endowed organization in town. It takes a strong board of education to withstand the onslaught and to keep a man who has the courage to live up to his convictions.

"I know of one superintendent who was the butt of attack because he was near-sighted and would occasionally pass some citizen on the street without giving him due recognition.

"Another superintendent had been educated at an outstanding university and had a record of great achievement in his school work. He did not see his way clear to continue in a certain club that spent its time in singing, in self-glorification and in trying to make itself felt as a political power. The superintendent was too busy for an organization of that type and he withdrew. And he was criticized for his lack of civic spirit.

"Thank the powers that be, there are still boards of education and superintendents who have enough courage to withstand the petty onslaughts of petty people and to do a good piece of work in spite of them!"

Another comment on the editorial comes from Tillman Peterson, superintendent of schools, Bremerton, Wash., who writes the editor of The NATION'S SCHOOLS as follows:

"Your editorial in the February number, 'Is the Superintendent Becoming a House Manager?' should not be passed by without some comment from men in the field. Without any personal rancor I can say that I have heard comments of this sort from a number of men who were very wishful of becoming superintendents but who lacked some of the personality traits required in most communities to draw such an appointment. In other words a number of such comments have come from sources where the tart reply could well be, 'Sour grapes!'

"Neither the superintendent nor any one else can be a specialist in every department. If he is a master in the field of practical organization and school finance, and is a supervisor, he is doing a big job.

"In the great majority of cases, I am convinced that the statement, 'The board of education sizes him (the superintendent) up in view of his qualities as a mixer and story-teller and man about town, and so on,' is flagrantly untrue.

"The true picture of the situation is that in choosing among candidates who are equally well qualified by training, ability, experience, and character, the board of education is more likely to choose the man who is a good mixer and has the most outstanding human qualities.

"There is unfortunately too much of truth in the editorial as regards a number of individuals in the profession. It would be tremendously unfair to use such a description for the great majority of affable and able men who fill their positions with graciousness, dignity, and genuine professional skill."

The NATION'S SCHOOLS

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Editorials

Scholarships for Secondary School Pupils

ANNOUNCEMENT has just been made of the establishment of twelve memorial scholarships by the trustees of Culver Military Academy. Each of these scholarships has a value of $6,000. They are to be awarded to boys who have finished the ninth grade and who wish to complete their secondary school training at the Culver Military Academy.

It is the intention of the trustees of the academy that a boy receiving a scholarship shall for three years have no expense whatever for his education. Not only his tuition but all his living expenses, including uniforms and all other accessories, will be provided by the academy. One scholarship will be awarded each year to an outstanding boy in one state. The trustees have appointed committees in each state to award a scholarship each year to the secondary school boy in the state who most completely meets the requirements in respect to intellectual ability, physical development, health, character, emotional stability and eagerness to develop his talents to the utmost. The state university is designated as the center for the final competition for the scholarship, and the committee of selection is comprised of psychologists and educators who will study the most effective methods of discovering superior ability and the other qualities that are essential in order to bring this ability to fruition and to make it of service to society.

Culver Military Academy is devoted to the training of boys for service to their fellows, and the purpose in establishing these scholarships is to make it possible for boys who give promise of leadership in civic affairs to acquire knowledge and training and discipline that will help them to use their talents dynamically and effectively.

Heretofore scholarships have been established principally in colleges and universities. It is encouraging to learn that attention is beginning to be given now to the financial aid of secondary school pupils of exceptional ability and high character.

The NATION'S SCHOOLS commends the movement in our country to assist superior boys and girls who are without adequate funds to complete their education. Until recently the tendency has been for men of means and of generous impulses

to set aside funds for educational buildings rather than for the maintenance of worthy students. For a long period, millions of dollars were given every year to build and to equip buildings for universities, colleges and, to some extent, for private academies and experimental schools of elementary and secondary school grade, while the establishment of scholarships and loan funds for needy but able students failed to keep pace with gifts for the material expansion of educational plants.

The situation has been changing, however, during the past ten years, and particularly during the past five years. Men who are desirous of promoting education in our country are apparently turning toward the establishment of funds for the aid of superior young persons in one way or another, and they are thinking less about the expansion of educational plants. This tendency can be most heartily praised. We have gone far and fast in material equipment in higher institutions particularly, and we need now to make it possible for exceptional boys and girls without means to complete their education for the benefit of society. It has been shown time and again that young persons of outstanding ability are often unable to develop their talents to the full because of lack of financial resources; it is a loss to any nation to permit exceptional talent to go undeveloped for economic reasons.

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Education and Narcotic Drugs

ABOUT the middle of May, a world conference on education with reference to narcotic drug addiction will be held in Geneva, Switzerland. It is not too much to say that the leaders in every progressive nation are interested in this conference and are eager that some way shall be devised to control the use of narcotic drugs. The League of Nations has a committee studying the problem. In our own country those who know the situation are a good deal concerned about the increasing use of narcotic drugs. The recent tragic death of some distinguished persons who became addicted to these drugs has impressed upon us the need of attacking this problem with vigor.

It is proposed that we should introduce into our public schools instruction pertaining to the disintegrating effect, physically and mentally, of narcotic drugs. There is no doubt that a narcotic drug habitually used will disintegrate body and mind; this matter is no longer debatable. But it is not clear how best to proceed in prohibiting the use of such drugs. It is doubtful whether instruction in the schools will do much good. We have laws now that require that all pupils be taught the evils of the excessive use of tobacco and of alcohol, but there is practically no evidence that this teaching restrains many young persons from indulgence in either tobacco or alcohol. This distressing fact has to be recognized since it is being proposed that pupils should be told what will happen to them if they habitually use any narcotic drug. To awaken terror of the consequences seems to be practically fruitless.

The greatest service that educators can render to the cause of drug restriction may be to cooperate with those who are endeavoring to build up defenses against the manufacture or importation of narcotic drugs. All intelligent nations are apparently eager to establish world prohibition of commerce in narcotic drugs. If we uphold this method of drug control we may solve our problem, but if we depend upon instruction in the schools to create an aversion to or fear of drugs we may be doomed to failure. We do not intend to be pessimistic about this matter, but we must deal with our problem on the basis of facts as shown by experience.

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A New Attitude Toward Compulsory Education

A STUDY of the program of the compulsory education officials who convened recently in Rochester, N. Y., for the discussion of their work is impressive, largely because it reveals an entirely new attitude on the part of those who compel children to attend school.

Fifteen or twenty years ago, compulsory education officials discussed ways and means of preventing children from staying out of school or running away after they were enrolled, and also ways and means of punishing truants when they were captured. At the Rochester convention the topics concerned a great variety of questions pertaining to the causes of truancy and humane methods of dealing with young offenders. The relation of health to school attendance was discussed, but ten years ago no compulsory education officer would have thought that this was an appropriate topic to be considered by those engaged in keeping children in school or tracing those who had become truant. The effect of adolescence upon school attendance was discussed. The relation between high as contrasted with low intelligence on the one side and truancy on the other was a topic that received careful attention at the convention.

There were many other topics, all of which indicate that compulsory education officers are not now regarding truancy as a crime to be dealt with

punitively. The enforcement of compulsory education laws is coming to be regarded as a problem requiring expert knowledge of child nature and the impulses that well up in children at different periods in their development and that make it difficult for them to be content in the classroom. The old idea of terrifying truants by putting them in jail, or threatening to do so, or by whipping or starving them is rapidly passing. Further, the notion that a truant is necessarily a weak, criminal, degenerate or immoral individual has either passed altogether or has become so enfeebled that it is not playing much of a rôle in the treatment of truants. The day is dawning when a person who lays a hand on a runaway child will have studied the urges that determine the behavior of the child and the adolescent and will have made himself familiar with the successful experiments that have been made in luring wanderers from school back to the classroom without hard measures. The compulsory school official can no longer play the rôle of a policeman or a headsman. This is all to the good so far as the welfare of the school, of society and especially of the truant is concerned.

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Enriching the Curriculum for Gifted Pupils

EVERYWHERE throughout America, and also throughout the more progressive foreign countries, educators are discussing the need of developing as fully as possible the talents of well endowed pupils. For the last sixty years in our country educational leaders have been concerned about this matter.

Something like sixty years ago, William T. Harris, former United States Commissioner of Education and before that superintendent of schools, St. Louis, became convinced that the schools were holding back gifted children in order to keep pace with their less capable classmates. He thought this was a wrong policy and he tried to provide for superior pupils by breaking up the lockstep in promotion. He worked out a plan by which talented pupils could progress through the schools more rapidly than average or backward pupils.

Since that early day, many names have been associated with plans for conserving and developing the talents of "above average" pupils. One thinks immediately of Superintendent Search of Pueblo, Col., Superintendent Van Sickle of Denver, Superintendent Kennedy of Batavia, N. Y., Superintendent Spaulding of Newton, Mass., and now of Yale, President Burke of the State Normal School, San Francisco, Professor Terman of Stanford University, Professor Hollingworth of Teachers College, Columbia University, Superintendent Washburne of Winnetka, Ill., Professor Morrison of the University of Chicago, and others. All these leaders have wrestled with the problem of providing for the intellectual needs of superior pupils, at the same time keeping them in their proper social group. They have wrestled also with the problem of devising some plan by which talented pupils may be taught in a class with average pupils and still be kept busy intellectually to prevent their forming bad mental habits or becoming a source of disturbance to the rest of the pupils in the school.

An experiment has been carried on in Appleton, Wis., for six years or so that has yielded results that give promise of solving the problem of providing for the gifted pupil while he remains in his proper social group. This experiment has been under the direction of B. J. Rohan, superintendent of schools, Appleton, and Dr. W. J. Osburn, formerly in charge of tests and measurement work for the state of Wisconsin and now professor of educational administration in Ohio State University and head of the department of measurement in the Ohio State Department of Education. The experiment has shown that "above average" pupils, while doing the regular work of any grade, can use their superior talents in related work that is not required in the regular school program.

Many clubs have been organized in the schools of Appleton, each club being concerned with a particular interest or activity, such as a botany club, an art club, a radio club, a newspaper club, a forestry club, a nurses club, a mechanics club, a salesmanship club, an arts and crafts club and a teachers club. These clubs have been conducted by the pupils themselves with the cooperation of the teachers when requested. Tremendous interest has been manifested in all of the clubs. Pupils must attain a certain standard in the regular work of the school before they are permitted to participate in the activities of any of the clubs This plan has served to utilize completely the time and energy of talented pupils and has kept them from loafing in school and spending surplus time in mischief. Such a plan should go far toward solving a problem that is perplexing administrators and teachers now and that has been perplexing educational leaders for five or six decades.

Superintendent Rohan and Doctor Osburn will soon publish a detailed account of their experiment so that it can be utilized by educators who are interested in providing for superior pupils intellectually while not imperiling their social development.

Practical School Administration:

Saving Money by the Concentration of Service

By PHILIP C. LOVEJOY, Formerly Assistant Superintendent of Schools, Hamtramck, Mich.

AN IMPORTANT method of saving money in education is the concentration of service by type, thereby reducing personnel and taking up considerable slack. It should be borne in mind all through this discussion that we are not advocating the arbitrary discharge of personnel but only the making of readjustments as resignations occur or as enrollment increases.

Since the policy of concentration has numerous applications, several examples will prove of interest.

Already we have referred to the number of classroom teachers in Rockford, Ill., who were idle while the special teachers were instructing classes. These special teachers totaled 58, of whom 19.5 were music, 19.5 drawing and 19 physical education teachers. A change was effected so that each teacher taught her own music, drawing and physical training under the supervision of a creative supervisor who spent one day every two weeks in each building. Thus the work of supervision was concentrated. In the platoon schools and the junior high school this work was already in the hands of special teachers. The changed plan for the elementary schools required only 28 teachers or a saving of 30 with an attendant budget saving of $41,816.14. That savings can be effected by such studies as those made in Rockford is indicated by the fact that the budget was reduced by $78,248.64 in the field of personnel alone.

The Teacher as a Specialist

Of course one of the greatest advances made in this field of concentration was the adoption of the platoon or duplicate type of school where each teacher became a specialist and held successive classes in this specialty. Thus tool subjects alternated with special subjects but each teacher was always busy. Even here in the beginning in many centers it was felt that relief teachers would be necessary owing to the load carried. Many centers have since found that this relief teacher is unnecessary, thereby effecting still greater savings.

This principle of concentration can well be applied in the field of administration. I am thinking of a situation in Michigan where there are six communities contiguous to each other that occupy an area of approximately thirty-five square miles. Presented in tabular form concentration in this community is as follows:

Community	*Sup't Salary*	*Number Pupils*	*Number Teachers*
A	$ 8,000	6,516	175
B	7,000	4,442	101
C	7,250	8,195	214
D	7,500	2,794	117
E	3,500	1,050	21
F	6,000	1,985	30
	$39,250	24,982	658

It is possible that two of these communities are well fixed financially. The other four are in a precarious condition. In some of them teachers' salary schedules were not maintained in 1930 when new contracts were issued. This was so because the amount outstanding in delinquent taxes was excessive. This amount is apparently uncollectible. The tendency seems to be for the property to revert to the state at the end of three years. The first major cycle will expire in June, 1931. In these six communities they are paying nearly $40,000 for superintendents' salaries. Notice that the total school census is but 24,982. The total teaching staff is but 658. (Of course, the entire census is not enrolled in the schools.)

The town of X in Michigan pays its superintendent $12,000 to supervise and administer the educational affairs for a school census of 44,900 pupils and 1,098 teachers. In two cities in Michigan the superintendents' salaries are $13,500 for a total of 24,887 pupils on the school census and 646 teachers. In two other communities in Michigan with a total of 43,400 pupils on the school census and 826 teachers the amount spent for superintendents' salaries amounts to the sum of but $19,000.

If the principle of concentration could be used in the six communities first mentioned, it would

Saving money by concentrating like functions

Large reductions in that huge cost of school administration could be effected and the entire system throughout the county placed on a higher educational plane if the 196 independent school governments were merged and redivided into a small group of units based upon the character as well as size of population, according to J. L. Jacobs, county efficiency expert who has made a study of the overlapping school districts.

OPPOSES SINGLE COMBINE.

Mr. Jacobs declared that, unlike other overlapping governmental agencies in Cook County, the school districts should not be entirely consolidated into one single, county-wide unit because of certain basic differences in educational principles of people in Chicago and those in other parts of the county.

But, Mr. Jacobs stated out, there are not so many heterogeneous communities within Cook County that 196 independent school governments, each with its own expensive administration staff and its own educational policy, would be required.

He stated that a very effective county-wide school system could be organized on the basis of about twenty or twenty-five school districts, which would eliminate a large amount of the present expensive overlapping in administration

and would provide more uniform educational facilities.

STANDARDS DIFFER

Under the present decentralized system, educational standards differ materially with each district. In the case of the "country town" districts generally they are conceded to be much lower than in Chicago, where teachers are better paid and mechanical facilities are of the most modern nature.

And yet the figures show that in proportion to population the taxpayers outside of Chicago are being taxed much more heavily for their overlapping school districts than are the residents within the city limits which are covered by but one school government.

COSTS CITY $80,000,000.

Chicago's school system, serving a population of more than 3,371,000 persons, spends, in round figures, $80,000,000 a year and has only $14,-000,000 in outstanding bonded debt.

The 196 independent school districts in the rest of Cook County, serving a total population of approximately 414,000 persons, spend more than $21,000,000 a year and have a huge total of $20,708,656 in outstanding bonded debts, for which the taxpayers in these districts must bear the additional tax burden of interest payments and bond retirements.

Figures, showing the last annual appropriations of these 196 school districts, grouped by townships in which they are either wholly or partly located, follow:

Township.	Number of districts.	Appropriations.
Barrington	11	$ 194,170
Berwyn	1	1,000,000
Bloom	10	1,081,000
Palatine	7	1,000,000
Calumet	1	115,000
Elk Grove	7	117,000
Evanston	3	2,160,000
Hanover	8	553,000
Lemont	6	77,950
Lyons	11	1,730,000
Niles	11	1,471,981
Maine	9	1,750,000
New Trier	1	1,125,000
Niles	1	250,000
Northfield	1	15,000
Norwood Park	1	15,000
Orland	7	16,000
Proviso	11	3,671,174
Palatine	7	84,000
Palos	6	37,000
Proviso	11	1,245,164
Rich	6	8,685
River Forest	1	297,000
Schaumburg	6	71,100
Stickney	7	77,000
Thornton	11	1,455,171
Wheeling	7	153,000
Worth	11	153,500
	196	$21,571,125

Similar to situation cited in Michigan

Nearly every state has similar situations

Likewise Standards are frequently lower in decentralization areas

City versus country costs

Stenos Hear Plans for Speeding Work by Wage Incentive

One way to pay clerks on education and obtain efficiency

Peculiar few Stenos voted for it

The "wage incentive plan," by which stenographers are paid according to the amount of work they do, their accuracy and speed, in the counting system, said Miss Florence Dauphin, chairman of a joint meeting of the Stenographic Supervisors' and the Office Managers' clubs of Chicago. They met in the Palmer house last night. She asked for a vote of those who favored that plan; only three women voted for it.

"One company has a wage incentive plan in which a girl gets $15 a week for 4,800 keystrokes," Miss Dauphin said. "For every 640 keystrokes over that amount she gets 2 cents, and after a certain number, 4 cents. It was possible to make $44 a week. That's too much."

Every one agreed. A corset company office manager said his company had adopted the wage incentive plan. For the first 1,500 points, with 240 keystrokes to the point, a girl made $15. When it started some girls making the biggest salaries lost their jobs, as they were proved inefficient; one girl rose from $20 to $36, and two girls made $37 a week. Each of these can be said, hit such a pace as to be dangerous to her health, striking five typewriter keys a second.

TEACHERS' PAY PROBLEM AIRED

Mayor's Committee Reaches Tentative Agreement on Recommendations.

A tentative agreement of what their recommendations shall cover was reached by the Mayor's Committee on Teachers' Salaries, meeting at the Board of Education headquarters today.

As suggested by [redacted] school inspector there will be four recommendations. One will change the terminology of the question presented to the committee by the Mayor from "teachers' salary raises" to the question of "adherence to the salary schedule."

A second will cover the committee's opinion as to the moral obligation of the board to adhere to the salary schedule. A third will be a recommendation as to whether the schedule is fair in the light of the present conditions, while the fourth will be a recognition as to whether or not the City faces a serious financial condition.

It was brought out that the board can lighten the budget by one or more of four methods. First, to eliminate the scheduled salary increases. Second, to make a blanket cut on all salaries. Third, to increase the teachers' load by giving each more pupils, thereby reducing the number of teachers.

Fourth, to eliminate an item of $1,475,000 in the budget for new school buildings. This item, however, would not be in the tax budget but would be raised by a bond issue.

As a whole, the committee's sympathy apparently is with the school teachers, eight of the 12 members apparently favoring the teachers, while only two seem opposed to maintaining the present salary schedule. These two are [redacted] appointed by the Board of Commerce, and [redacted] real estate dealer, who was named by a newspaper.

Is adhering to a Salary Schedule the same as granting an increase in Salary?

FOUR METHODS OF CUTTING COSTS

[redacted] Pay Taxes.

To the Editor: It seems that [redacted] in [redacted] township is one of the highest places in the state for taxes. The tax rate out here is over $60 per $1,000 valuation and about all we have is mud and more mud. We have a few nice schools but we sure have to pay for them. No matter who gets into our township offices, the taxes go up. If they keep on, the State will soon have all of [redacted] Park for back taxes.

It soon will be election time again and I wonder if office seekers who get elected will do anything to stop our taxes from going higher.

TAXPAYER.

Schools do cost money

Mayor [redacted] recently raised the salaries of school teachers, who were already receiving sufficient to live in comfort, and many of these teachers are married women with husbands working. These teachers are exempt from all income tax, get reductions on purchases, lay off two months in summer and work fewer hours than store, office or factory employes per day. Is this justice?

Any man in public office today who is not willing to live on less than $1,000 a month belongs in some private corporation. Even there a board of directors and watchful stockholders would have something to say on this proposition.

The problem of the married teacher pops up

The other side of the fence always has greener pastures

SCHOOL BOARD CHAUFFEURS.

[redacted], Jan. 14.—I notice in today's [redacted] that the school board trustees are including in their budget for 1931 salaries for eight chauffeurs at $200 per month each. You can hire the best for $150 and there are scores who are looking for jobs who I dare say would be glad of the job at from $100 to $125 per month. It would not be hard for a taxpayer to think that each one of these $200 chauffeurs had to donate about $50 each month to some politician, an equal of the jobs seem to have to be paid for in these days. I heard today of a school teacher who was asked $200 for a job as teacher.

Suspicion is a bad factor in public finance

[redacted] SCHOOL HEAD WILL SERVE 6TH YEAR

Special to [redacted].

[redacted], Mich., Jan. 31.—At a special meeting of the [redacted] board of education this afternoon, [redacted] was re-engaged for his sixth term as superintendent of the [redacted] public schools, his salary to be fixed later.

The board met primarily to consider reducing the salaries of the teachers. No decision was reached. The teaching staff of the [redacted] public schools numbers 97 members. No additional teachers will be engaged during the coming year, it was stated.

Salary later

Need of Economy

TEACHERS WAR ON SALARY CUT

[redacted] School Board Faces Opposition to Move To Reduce Expenses.

[redacted], Jan. 22.—If the [redacted] Board of Education, meeting tonight at the high school, carries out its plan to cut salaries, a general exodus of teachers from the city at the end of a month may result. It was intimated that many teachers would resign rather than accept lower pay.

The board needs $300,000 to finance the school system until June and is planning numerous economies to impress financial interests, when a loan is requested. One of these includes the cutting of salaries paid to 214 teachers.

Miss [redacted], principal of the Whittier School, has been delegated by the [redacted] Teachers' Club to speak in their behalf tonight. She is expected to cite reasons why salaries should not be cut. Among them will be the charge that teachers "willingly signed contracts for the year, waiving the increases usually granted for additional experience and study. After signing contracts, the teachers discovered a clause making it possible for either party to cancel the agreement on 20 days' notice. The clause had not been in previous contracts, the teachers say, and their attention was not called to it. Another clause, which previously allowed teachers 10 days' absence for illness, specified five days this year, the teachers declared.

"We are faced with a serious situation," declared [redacted] president of the board. "Delinquent taxes have left us without sufficient funds to operate the system, and we need $300,000 to enable us to keep the schools open until June. Naturally, we will have to cut expenses some place and the largest item in our budget of $700,000 is for salaries."

Shortening of the school year by two weeks has been suggested as a means of reducing expenses. [redacted] schools do not close for a spring vacation, allowing holidays only on Good Friday and the Monday following Easter. The present semester ends Jan. 30, and the second semester begins Feb. 2.

The fiscal year ends July 1 and the new budget usually is drawn in April. A recommendation that the budget be cut 25 per cent was made recently by the taxation committee appointed by Mayor [redacted]. The recommendation was included in the City Commission minutes of Jan. 12, but was withdrawn Jan. 19, when Miss [redacted], a teacher of community civics in the high school, objected to its appearance. She declared the recommendation had been adopted at the suggestion of Mr. [redacted], a member of the committee. The teachers claim the recommendation was used as a special meeting of the school board last Wednesday as an incentive for reducing salaries. Mayor [redacted] is a member of the committee and also of the board of education.

Is a Board of Education supposed to foresee conditions to such an extent as to be able to maintain contract conditions once signed?

Should teachers expect salaries to remain intact during life of contract

The community mentioned in this article is listed as Town "C" in the April Article in this department

SCHOOL BUDGET IS LEFT INTACT

Committee Names Sub-committee to Frame $3,000,000 Demand on City.

The mayor's committee to decide where the school budget is to be cut $3,000,000, met in the board of education building Wednesday and after two hours of discussion decided to appoint another sub-committee.

Definitions again monopolized the meeting. Whenever [redacted], representing the Board of Commerce, spoke against "raising" teachers' salaries, some other member insisted that allowing annual increases meant no raise and that disallowing meant a cut. To what extent the teaching staff can be compared with the medical profession, or with the business of being a policeman, was debated at length.

Whatever It Is, It's [redacted]

A nine-page dissertation [redacted] presented was the subject of much argument, the basis of which was whether it should be termed a statement, report, argument, appeal, special pleading or traditional review. At any rate, it was finally agreed, it cannot be considered a personal expression and not necessarily the views of the entire committee.

Other members said they wanted to submit their own feelings in writing. The sub-committee, composed of [redacted], is to digest all statements and bring up a report in which majority and minority ideas all will be appear, properly identified.

Says Policemen Worth More.

Highlights of the session included a query by the chairman, Mrs. [redacted], as to why the city constantly lays pavement and tears it up again, a demand by Thomas to know the average cost of an ordinary big street light, and a statement by [redacted] that policemen should be paid more than teachers because "policemen work 365 days a year."

No Salary Schedules Raise pay?

Civic waste

Policemen vs Teachers

The Daily Tribune LETTER BOX

This column is open for the discussion of problems affecting Southern Cook County.

Unsigned letters can not be considered. The writer's name and address must be signed as an evidence of good faith.

Opinions expressed are those of the writers, not of The Daily Tribune.

TEACHERS' SALARIES

To the Editor:

Why do the authorities all over the country hesitate to cut the school teachers' salaries. Everywhere is being cut and don't they know if they are not cut, they are being given a big boost on account of the much lower cost of living. Why should they get this boost in a time like this? Who are they that they have such a hold on the powers that be. I happen to know a lot of teachers and most of them are actually laughing up their sleeve at these powers for they have them bamboozled on. They have always gotten large pay and ever since most things are on a pro-rata basis, why keep up the war-time wages? It is not only silly but senseless. If any private enterprise run their business as the school board is run as regard to salaries, the sheriff would have them in three months. Everybody knows why there is so many taxes delinquent. It is a mighty serious matter. There are altogether too many homes being lost on account of taxes. No one however, seems to do anything but talk and that does not buy the baby shoes. If these boards would forget the lobbies and get down to brass tacks and do something to relieve the taxpayers they could really make a name for themselves and probably would survive the few darts thrown at them by the teachers. Understand I am not against the teachers at all but am against war time salaries in times of depression. If more of the taxpayers would rise up and object, it would make it easier for these boards to do the right thing.

—T. B. E.

This is Town "C" mentioned in April Article

The Editorial at the Extreme right on this page refers to this same Town "C"

Concentration would have saved much money

Moderation in Taxation.

To the Editor: The article written by [redacted] of [redacted] on "Moderation in Taxation," which appeared in The [redacted] of Dec. 2, should be read by every [redacted] property owner. What Mr. [redacted] said is true not only of [redacted], but our entire state. I wish to repeat some of the statements made by Mr. [redacted] because they are words of wisdom that certainly are needed at this time.

"1. The legislature and taxing bodies whose continuous and mounting levies over the past 10 years are now making them the aforementioned taxpayers scrape their noses off on the grindstone in an effort to pay for governmental frills.

"2. People are like sheep, there is no doubt about it. They do not think in politics on matters economic, but follow blindly the bally-hooers and propagandists and the public officers who are the Yes-Men of the ballyhooers and propagandists.

"3. Well, the day of reckoning is not far distant. When large property owners not only make no money on their property but run dangerously behind because of high taxes and vacancies ranging all the way from 100 per cent and when thousands of small property owners out of work are going deeper and deeper into debt or losing outright their small stake in a community the powers that be (and I don't mean only politicians. I mean as well influential organizations advocating public money for this and that improvement from which they will benefit while the taxpayers foot the bill) may be very sure that a grand financial collapse is not far off. For local taxation is no longer constructive. It has passed well beyond that point and become destructive.

"4. Not very much more can be added to the burden of the property owner, else [redacted] will go the way as the city that taxed its prosperity away."

Mr. [redacted] ends his timely article by indorsing Mr. [redacted]'s suggestion to call a mass meeting of taxpayers and organize concerted action to better the conditions that have become intolerable.

Let me say for the benefit of both Mr. [redacted] and Mr. [redacted] and all other home property owners that there is such an organization now known as the Property Owners' Division of the [redacted] Real Estate Board and this organization is composed entirely of property owners organized exclusively for their interests and every [redacted] property owner who is awake to his own interests should join it at once, and do their bit.

The day of Reckoning

See also Editorial at extreme right of this page

The clippings assembled on these two pages were taken from the public press over a period of only two weeks. It can be seen at a glance the many attempts being made to curtail school expenses.

SEES NO RAISE FOR TEACHERS

[redacted] Declares Budget Cuts to Date Make Increase Impossible.

A wealthy city finds it impossible to keep its word as expressed in a salary schedule

Because of high community costs must the teacher and children suffer?

Cuts already made in the school budget by the Board of Education have already made it impossible for the board to pay the scheduled salary increases to school teachers, in the belief of [redacted], assistant superintendent of schools, [redacted] made the statement at the second meeting of the Mayor's committee on teachers' salaries, which met today at the Board of Education headquarters. Twelve members of the committee, including [redacted], were present.

"As a humble employe of the board I think the salary schedule increases are already out of the budget, in money if not as an item," he said.

[redacted] gave the committee the details of how teachers are paid and when they sign their contracts.

OUTLINES FINANCIAL STATUS.

The City's financial situation was outlined by [redacted], of the [redacted], who is acting as secretary of the committee.

"I don't believe more than one [redacted] in every 100,000 realizes the overwhelming seriousness of the City's financial condition," [redacted] said. "I don't know whether the Mayor's program of cutting the City's deficit without raising the tax rate is politically sound, but I am convinced it is economically sound."

Other members of the committee who attended the meeting were: [redacted], Mrs. C. S. [redacted], president of the Federation of Women's Clubs; [redacted] and [redacted], school inspectors; [redacted], representing the teachers, and [redacted], principal of [redacted] High School.

Mayor [redacted] intends to cut $3,000,000, or nearly $1 per $1,000 in the tax rate, from the budget of the Board of Education by eliminating items which "in themselves are desirable but which the City can not afford under present conditions," he said today.

The cut, he said, would be made in addition to reductions already made by the board.

The Mayor also declared he intends a general realignment of salaries paid by the board, through the reduction of the large sums paid some of the executives and increasing the teachers receiving the least pay.

MAY SHORTEN TERMS.

One measure which may be resorted to to effect part of the $3,000,000 cut will be shortening the school year from 40 to 38 weeks. His close advisers have informed the Mayor that [redacted] school year is several weeks longer than that of most cities. Such a move would save between $500,000 and $750,000.

The Mayor said he also intends to eliminate such activities as archery, tap-dancing, summer schools and the children's museum.

The board's system of higher education will not be cut out, but will be curtailed so that it will be self-supporting, the Mayor said.

Would one think of cutting the term of fire and police protection shorter?

Are Schools of less value?

Is it economical to turn thousands of children loose on city streets?

Less Schools more Playgrounds or more delinquency

The cost is there

MAYOR BEGINS BUDGET REVIEW

Director Tells Members of School Board 'Drastic Reductions Must Be Made.'

Mayor [redacted] began his review of the 1931-32 budget today, with the Board of Education the first City department to present its estimates.

Members of the school board, attending the meeting in the [redacted] Building, were told by [redacted], budget director, that "drastic reductions must be made."

They also received, for the first time, the recommendations of the Mayor's committee of bankers on the Board of Education budget.

The committee recommended a number of sweeping changes in policy in the educational system to achieve economies. It urged that a 20 per cent reduction be made in expenditures for certain specialized activities; that a curb be placed on the expenditures for vocational education; that higher education be made self-sustaining; that night and summer schools either support themselves or be discontinued, and that swimming pools be discontinued.

SHORTER TERM SUGGESTED.

The committee declared such economies would save the taxpayers $1,000,000 a year. Shortening of the school year by one week would lop off another $1,000,000, it was said.

This is Town "C" mentioned in April Article It is referred to in Columns 3, 4, 8 this page

Maybe we must deflate all public expenses to discover reality and true value

UNPAID TAXES BURDEN A CITY

[redacted] Feels Pinch, but Is Not Bankrupt; Schools Discuss 2 Remedies.

(FROM A STAFF CORRESPONDENT.)

[redacted], Mich., Feb. 6.—Although [redacted] is having difficulty in obtaining a loan of $500,000 to carry it through the rest of its fiscal year, and its school board is considering shortening the school term by two weeks or reducing teachers' salaries, the city is by no means "bankrupt" or in such serious financial straits as have involved other southern [redacted] County communities. Delinquent taxes and delinquencies in heavy special assessments arising from [redacted]'s rapid development are the heart of the trouble.

"Our troubles are caused entirely by tax delinquency and by the difficulty, this year, of raising loans with delinquent taxes as security, City Manager [redacted] said today. "Our delinquencies total about $1,400,000. Delinquencies in the 1930 general tax roll and 1929 special assessments, on which we are free to borrow, total about $549,000, but we have not been able to borrow the $500,000 we need to meet running expenses the rest of the year.

CREDIT STILL SAFE.

"We may have to suspend monthly payments on the principle of the city's bonded indebtedness, but we think we will be able to meet the interest payments.

"Our collections, which average about $100,000 a month, are sufficient to meet payrolls and current expenses.

"We have not yet made an $8,000 payment on a special assessment bond due Feb. 1, but we paid bond interest of about $35,000. We have the $8,000, but we do not want to run our treasury balance too low. We have 90 days to pay the sum before the city's credit is affected.

"We have reduced the city's payroll from a monthly average of $29,229 in 1929 to $23,054 this month and we expect to have it down to $20,000 by spring."

RECEIVERSHIP SUGGESTED.

The city is faced with a virtual receivership unless it reduces expenses radically, the city commission meeting with the board of [redacted] Thursday, was told by [redacted], representing [redacted] bonding holders. He said the [redacted] is willing to loan $10,000 immediately to enable the city to pay interest on obligations which became payable Feb. 1.

The commission asked [redacted] to find out how much the city can borrow on its past-due taxes. If a sufficient amount can be borrowed to pay interest on the obligations totaling $250,000 coming due by July, the city plans to pay the principal sums later.

"Borrowing money will ease your problems temporarily," [redacted] told the officials, "but it will not solve them. If you collect only 65 cents of every dollar, you will continue to go behind. Drastic economies must be effected, even if the bonding companies have to place a representative in your city hall to pass on all expenditures. This would amount to a virtual receivership."

THE SCHOOL SITUATION.

The school board's troubles also are caused by tax delinquencies, according to [redacted], president.

"School taxes are delinquent about $300,000," [redacted] said. "I think we will be able to borrow about $250,000, which, when with about $80,000 to be pared from our school expenses before the end of the school year. Our present funds would be exhausted about April 1.

"We are considering, as possibilities, reducing teachers' salaries or shortening the school year by two weeks, but we do not want to curtail the efficiency of our excellent school system if it is possible to avoid it. The teachers received what amounted to a salary cut last June when we suspended our salary increase schedule. The teachers' payroll totals $40,000 a month."

RECOMMENDATIONS MADE.

The specific recommendations of the bankers' committee were as follows:

1. Place the kindergartens, visual educat on, children's museum and children's baths on a cost basis equivalent to 40 per cent of the sum expended for these activities in 1929-1930.

2. Place vocational education and vocational continuation schools on a basis commensurate with the average cost for a student in high school, not to exceed $135 each.

3. Place the College of [redacted], the [redacted] Teachers College and the [redacted] College of Medicine and Surgery on a self-supporting basis by increasing the tuition.

4. Either discontinue the summer and evenings schools or make them self-supporting by increasing the tuition.

5. Discontinue swimming pools in the schools because of the expense of operation.

6. Review the program of new school construction for the purpose of cutting it to a minimum.

"Of course, those men know very little about the schools," said [redacted], member of the school board, in commenting on the report.

Notice these concrete ways of saving money

Do you agree

Will they really save in the long run?

Are articles such as these a hobby or is there a real Basis?

SCHOOL BOARD SPENDING HIT

[redacted] Moves To Have All Expenditures Passed On by Council in Future.

Criticism of the Board of Education majority which "handles huge sums of public money and increases the public debt by condemning property which is unnecessary, without consulting the Council," was voiced in today's Council meeting by Councilman [redacted].

The Council, on [redacted]'s motion, directed [redacted], corporation counsel, to draft a bill for submission to the Legislature, to require the board and all other City departments to gain the approval of the Council before starting any condemnation suit.

The only other department that now has this right without the Council's approval is the Public Library Commission, [redacted] told the Council.

REDFORD SITE CITED.

The immediate subject of [redacted]'s criticism is the condemnation case involving land to be used as an addition to the site of [redacted] High School. The land is owned by [redacted].

The case involved an addition which was first declared unnecessary by [redacted], deputy superintendent of schools. Later, when the Board of Education voted to condemn the property, [redacted]'s recommendation was changed, and the case was carried to court.

MADE $165,000 OFFER.

Two city appraisals set the value of the property at $107,000. The jury's verdict, however, was $182,500 and when [redacted] criticised the board's action in the Council the board voted to withdraw the case from court before the verdict was confirmed.

Later, however, the board voted to purchase the property for $165,000. This action was taken by the board by a vote of four to three and the matter is now before Mayor [redacted] for approval or veto. If the Mayor vetoes the board's action, three votes would be sufficient to sustain it.

BUDGET PARED BY $3,300,000

Mayor Takes Off Quarter of Expected Cuts at First Review Hearing.

Approximately $3,300,000 of the $16,000,000 Mayor [redacted] plans to cut from this year's city budget requests was chopped off seven city departments Monday in recommendations presented by Budget Director [redacted] at the first of the budget review hearings, held in the water board office.

The public school system received the largest slicing, a $2,315,305 cut being recommended, which would bring the board of education tax roll total for the year to $16,248,607. This would mean, according to school officials, that approximately 45 buildings already completed or in progress would have to stand idle next year for lack of money to equip or staff them.

It also would involve raising tuition in collegiate departments of the system to a point where they would be self supporting; it would mean charging tuition for summer school and extension course students, and necessitate curtailment of the cost of vocational education, officials said.

Bankers Give Advice.

Opening discussion of the school board budget of $24,693,712, of which $18,563,712 is composed of tax items, [redacted] presented recommendations of [redacted], the bankers committee appointed by [redacted] to advise him on the school budget. The bankers reported $1,500,000 could be saved by:

Cutting the costs of the visual education department, the kindergarten department, the children's museum and the children's baths 20 per cent under last year's costs.

Limiting the cost of vocational education to $135 per student, which is the cost for regular high school pupils.

Discontinuing operation of all swimming pools and playgrounds.

Making the following departments self sustaining: College of the City of [redacted], [redacted] Teachers college, College of Medicine and Surgery, and all summer schools and evening sessions.

Another $1,000,000 could be saved, the bankers reported, by cutting short the school semester one week.

Carver's Recommendations.

[redacted] recommended cuts, which ran through the entire school budget in items from $50 to $1,500,000, were based on eliminating all growth in the system.

No new teachers' pay increases would be granted, although increases awarded last fall would remain, no new employes hired, no expansions made or new equipment added. This would mean that approximately 32 schools and school additions to be completed during the year could not be opened, for lack of equipment or teaching staffs, it was pointed out.

It also might mean, members of the board of education said, that 18 more school projects, which are being equipped and opened with the present year's funds, would have to be closed again for rack of funds to pay teachers.

[redacted] also recommended making collegiate courses self-supporting by raising the tuition, and advocated charging tuition for summer school and night school classes, from elementary grades up. This would virtually destroy many of the night school and summer school classes, members of the board said, since experience had shown that pupils would not attend if a charge were made.

Bankers Know Money Do they Know Education

Educators Know Schools Do they understand Finance

If no new teachers are hired class size will have to be increased unless less children attend School

[redacted] THE FIRST CASUALTY.

The financial predicament in which the city of [redacted] finds itself with its treasury depleted, its credit gone and extensive bond issues coming due, is an example of the situation many municipalities of the country are facing or find threatening them. [redacted] leads the procession, that is all.

In some instances, severe monetary readjustments will prevent an open smash. In others, nothing may stop disaster. But in all the cases, real trouble lies ahead. Cities, and states, too, for that matter, have played; now they must pay, if they can.

For many years such men as Calvin Coolidge and Secretary Mellon have repeatedly warned the country to put an end to the wild orgy of free spending by state and local governments that has been sweeping the land like a perpetual epidemic. Within its sphere, The [redacted] has pleaded for economy in public enterprise, and for careful monetary administration by legislative bodies and executives. But nobody, anywhere, has seemed to pay any real attention to warnings and protests from anybody.

Now the end of the joy ride has arrived, and the most skilful sort of driving is going to be none too adequate to prevent the finale from producing a lot of wreckage.

The recklessness with which bond issues have been authorized and sold all over the land, the wholesale way in which public debts have been piled up on every hand, have created a burden which was beginning to stagger taxpayers even while times were good. Now it is beyond their power to lift.

In many of the smaller or less wealthy municipalities, property owners simply cannot pay their swollen assessments. This means that interest on bonded debt cannot be met. So there are municipal obligations in some parts of the country, particularly in the south and southwest, which are selling from 40 to 65 cents on a dollar. Doubtless, in most instances, these securities will "come back," but they are going to do so only as a result of a long period of rigid public economy, and after much pain and travail on the part of the taxpaying public, which in the end includes everybody.

It won't do any good any more to merely talk about retrenchment and economy either. "Planning" for reform won't help. Reform must be instituted—at once.

This applies to [redacted] as well as to other places. This city is still in a position where readjustment of its public finances can be accomplished less painfully than the feat can be put over in many towns. But, even so, the task will be no simple, easy one.

Expenses must be cut and cut drastically. If a dollar is spent, value for it must be received. Luxuries and non-essentials must be cut out, and perhaps even some of the things we have become accustomed to consider necessities. The public peace, health and safety must be preserved, but in a businesslike, frugal way. The municipality cannot continue its orgy of luxury, extravagance and waste. It must pull in its horns and commence living a simple life.

Taxpayers simply haven't the money with which to meet demands of the sort the city government has been making for the last fifteen or twenty years. At this moment there are owners and lessees of large and valuable downtown properties who are one and two years behind in their taxes, and do not know where to get the money with which to pay them. This is not their fault. The burden piled on their shoulders by reckless government is too great to carry except in abnormally prosperous times.

And if large and presumably wealthy property holders cannot meet their public obligations, how is it to be expected that small property and home owners will do so? They can't. They don't. They won't. They must have relief.

The beginning of relief must be a sharp decrease in the demands made by the local government agencies. We must have extensive financial readjustments with cuttings of estimates until even the bones have slashes in them.

The municipal budget for next year is already under consideration in the city hall. It is directly up to the mayor and the council to commence the reform now, and carry it through ruthlessly. Economy is the biggest public need in [redacted] today except police and health protection. Even education takes second place.

The Fiddler must be paid.

The editorial at the right presents the real difficulty that confronts schools to-day. Unwise management has failed to foresee the need for economy. The school executive must from now on study his field with care.

be possible to pay from $12,000 to $15,000 for a superintendent, provide two first-class assistants and still save thousands of dollars.

The Situation in Rockford

This principle of concentration was utilized in the city of Rockford, Ill., in the field of elementary school principalships. Five years ago it was the policy of the board of education to have a principal in each elementary school devoting his entire time to supervision and administration. The number of teachers under each principal varied from 9 to 23 with a median number of 16. Because of limited revenue the board of education adopted a policy of concentration whereby two or more buildings were assigned to one elementary school principal as vacancies occurred. Furthermore, principals of buildings with fewer than 400 pupils were asked to teach half time. When an elementary school principal was assigned two or more buildings, in each building there was provided an assistant principal who taught a full load and in addition assumed some of the building clerical duties formerly performed by the principal. For this service the elementary assistant principal received $15 per teacher per building per year, in addition to her regular salary.

The Old Versus *the New Scheme*

In the past five years due to resignations and promotions and the opening of a new building, seven principalships have been absorbed in this manner. A summary of the changes is presented here and shows the number of teachers per principal as called for under the old scheme and under the new scheme.

	Old Scheme	*New Scheme*
Minimum number	6.5	15
Maximum number	20.00	24
Median number	12.0	19.5

The Rockford report states that there is every reason to believe an elementary principal cannot use all of his time to an advantage in supervising an elementary school of 9 teachers. Elementary school principals in some cities have 50 or 60 teachers under their supervision. It seemed entirely within reason, therefore, to expect an elementary school principal to supervise at least 25 or 30 teachers when clerical assistance was supplied in each building by the assistant principal. The cost of the principal's administration and supervision in the elementary schools under the old scheme applied to the present situation would amount to $55,000, while under the readjusted scheme the cost is but $39,287.50, or a saving of $15,712.50 each year. This is a reduction of 28.56 per cent.

The comparison of costs for principalship service is shown in the accompanying figures.

It is to be noticed that there is a far narrower range of costs under the new scheme than under the old. The new plan has several advantages as follows: It equalizes the load of principalships; it is in keeping with modern school organization; it is more economical; it equalizes the duties of

	Old Scheme	*New Scheme*
Per Teacher		
Maximum	$423.07	$193.13
Minimum	137.50	126.66
Median	268.45	153.95
Per Pupil		
Maximum	11.45	5.43
Minimum	3.57	3.12
Median	6.26	4.48

administration and supervision; it relieves the principal of many clerical duties; it gives the principal more time for the supervision of instruction in the classroom; it emphasizes the principalship as a supervisor of instruction rather than a clerk to make reports, issue supplies and answer the telephone.

This principle of concentration can be utilized with reference to mimeographing within a system. In Hamtramck, Mich., one girl was appointed to care for all of this work. She was given two mimeographing machines, operated by electricity, and she was also provided with two gelatin bed reproducing machines. All stencils or master copies were sent to her ready for running. A better product was supplied at less cost and with greater speed. Other girls were left free for other types of work.

Another example of this principle of concentration is the substitution of a corps of creative specialists for the old-fashioned roaming supervisors. The principal of each school is to be held strictly responsible and accountable for the supervision of instruction within his building. If we take six major fields of activity for these creative specialists we shall have in the school system one for each of the following fields: health, languages, exact science, social science, vocational and fine arts. Creative research would be concentrated in the hands of these six working in conjunction with the psychological clinic and with such other agents as might be needed from time to time. These six creative specialists would constitute a helping squad ready on call to analyze a given situation and to offer suggestions for improvement. In Hamtramck, Mich., it was found that this system produced results far superior to those of the system previously used.

If a principal is charged with the supervision of instruction within a building, it is possible to

"No wonder she's so keen on school!"

MOST teachers have listened to these exclamations of surprise. The older generation finds much that is new and unexpected in modern educational methods—a new sympathy in the teacher's attitude and a new cheerfulness in the classroom.

Attractive Sealex Floors are playing an important contributory role in "cheering up" the school. For the lower grades, we create floors (and "finger-proof" wainscoting also) in cut-to-order patterns that may feature picture book designs, alphabets, geometric figures or game markers. For corridors and classrooms used by more advanced grades we recommend Sealex Veltone, Jaspé, or Battleship Linoleum.

These Sealex materials contribute more than color and brightness to the classroom. Teachers have found that their noise-absorbing quality helps to maintain concentration. There are no splinters—no yawning cracks to harbor dust and germs. Unlike other floors, Sealex floorings do not require constant painting and refinishing to prevent them from becoming an actual *source* of dust.

When Sealex materials are installed by Authorized Contractors of Bonded Floors, we back them with a Guaranty Bond. Our School Floors Department will gladly give you full information.

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utilize this principle of concentration and to eliminate department heads. A principal receives a higher salary than teachers because he is especially capable of supervising instruction. Of course, if he is to devote his time to this valuable work he must be relieved of administrative details; hence, an assistant principal together with a corps of capable clerical assistants will be provided. Such a procedure would eliminate heads of departments as supervisors of instruction. These former heads of departments could be given a full teaching load, in fact possibly heavier than the teaching loads of the other teachers, because of their special control over technique. The extra pay required by the head of a specific department would in this way be saved.

All through this discussion it must be remembered that if we eliminate personnel now or change their status or reduce purchases, there are those who are going to register objections. This is especially true of those most affected. Therefore, we are constantly urging that most careful consideration be given to what is right, fair and just in view of extraordinary financial circumstances. Whenever possible, the change should be made at times of personnel turnover. A glance at any newspaper, however, will convince even the most casual reader that something must be done to reduce expenses. Within two weeks' time I collected the clippings shown in the accompanying illustration. The editorial at the extreme right sets forth the real difficulty. It is now time to pay the fiddler in many communities. Unwise management has failed to foresee this need. The school executive must study his field more carefully.

The Financial Problem

Now let us look at other phases of the personnel problem to see where we can continue to save money.

In the matter of school election probably little can be done because such affairs are regulated by law. Usually election inspectors receive a rather high wage for the work performed and there is a possibility of a readjustment in this field.

As far as legal service for a school system is concerned, if the executive is well grounded in educational and financial procedure he will be able to advise the board capably. Of course from time to time it will be essential that a disinterested legal opinion relative to bond issues or other phases of the system be obtained. In the long run, however, the executive, by using due caution, can save the community much grief and legal expense.

The topic of salaries for members of the board of education is a little more difficult to discuss. It goes back to the theory of what is expected of the board. Inasmuch as education is a highly technical process and in the last analysis must be delegated to a competent executive and assistants, it would seem that ordinarily the board of education will be composed of laymen. As such they represent the people in adopting a policy for public education in the community and finally appraising the product achieved in terms of this policy. Ordinarily boards of education meet monthly or semimonthly. Usually sessions are a couple of hours in length. We believe that "patriotism without profit" is as much needed to-day as it was in the time of George Washington, and that frequently certain tasks fall as delightful obligations upon the part of the citizenry of the democracy. No pay, therefore, need be granted for many public services. In other words, serving one's country as a member of a board of education for a period of forty-eight or fifty hours a year is a partial fulfillment of one's duty as a citizen and a partial repayment for some of the protection and privileges enjoyed.

To Pay or Not to Pay the School Board

Here then is a concrete method of saving money. Reduce the salaries of the members of the board of education or, better still, eliminate them entirely. Any board of education that is vitally interested in saving money for its constitutency should first consider such a step. Inasmuch as there are no committees of a board in a modern functionally organized system of public education, the member has no other duties than to sit as a legislator and appraiser of educational matters. Probably he should be reimbursed for any out-of-pocket expenses, but beyond that, why pay him? Thus in a system where there are seven board members, each receiving a salary of from $500 to $1,200 a year for fifty hours' work, an immediate saving of from $3,500 to $8,400 can be effected.

The matter of salary schedules for teachers is of great importance. Of course if these schedules become a part of the minutes and policy of the board they should be maintained. The numerous clippings shown on pages 76 and 77 seem to indicate a tendency to repudiate many of them. This tends to break down the morale of the teaching force as well as to disrupt the smooth working of the system. Some school systems utilize an automatic increase as a basis of payment. Merit apparently is not considered. Such schedules are expensive when compared to the preparation-development-merit type.

In large metropolitan areas, steps may be taken whereby an individual may apply automatically for a position in each system in the area when she has applied in one system. A great saving in the

It is a Menace and a Nuisance—

Stamp It Out!

Garbage and rubbish storage has no place in a modern School. Germ-breeding food waste, stored in garbage cans and waiting for the call of the garbage truck, is a positive menace to the health of your students.

Modern hospitals do not allow it. Modern hotels have cast it out. Modern schools, too, are finding it an unnecessary menace—an avoidable nuisance!

And Rubbish is a dangerous fire-risk!

Insurance underwriters state that a majority of all fires either start in rubbish piles—or would be harmless if they did not find combustible refuse conveniently *stored* for them to feed upon before they are discovered.

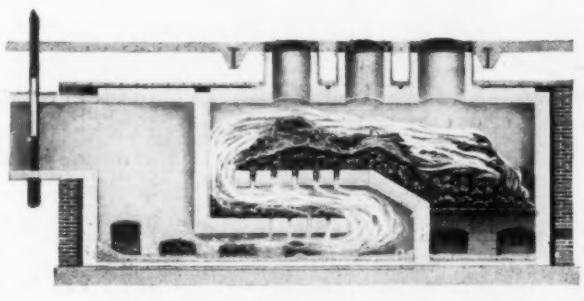
It is *unnecessary* to put up with these twin nuisances . . . for it costs more to store up refuse and haul it away than to destroy it—instantly, completely—by modern incineration on the premises.

A FEW TYPICAL INSTALLATIONS—

Archdiocesan Seminary.....Area, Ill.
N. J. College for Women. New Brunswick
Morgan Park Mil. Academy....Chicago
Westminster College.....
.....New Wilmington, Pa.
Roosevelt H. S.....Altoona, Pa.
White Plains H. S...White Plains, N. Y.

For safety and savings—*eliminate* garbage and rubbish storage from your school!

Send for complete details—or consult your experienced local representative.



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time of the applicant would thereby ensue, as well as a saving in printed forms and in the time of school executives themselves. A system such as this is in embryonic form in the Detroit metropolitan area.

One of the most significant advances in educational administration is cooperative research. Control groups have always been necessary. In cooperative research they are provided at the outset. A director of research can well supervise such work in more than one system. Much money can therefore be saved. In an area surrounding a large city there may be ten or a dozen communities that could well profit by participating in such an arrangement. Each community would pay a portion of the director's salary—and in return receive as much expert service as ordinarily is provided only in large cities.

In many secondary schools and in some junior high schools it has been found possible to operate with fewer clerks in the administrative office by utilizing the services of the advanced pupils in the office practice classes of the commercial department. The chief clerk paid by the board of education to be an assistant in the principal's office directs the practical work of such pupils two or three days a week. The pupils profit by a practical training. The school profits both from the standpoint of saving money and from the automatic results in the field of public relations by teaching these pupils the details of school management.

Supplying mechanical devices to operating employees or, for that matter, to all personnel that might profit by them, is simply good business. A clerk charged with the work of multicopying can perform more and better work with the aid of a machine. Two electrically operated mimeographs may be of material assistance and can usually be purchased second-hand as rebuilt machines. New devices for cleaning erasers are far superior to the old-fashioned method of beating out the dust and incidentally they are more sanitary. Vacuum cleaning systems have proved themselves more sanitary and permit the custodian to do more cleaning per hour. His energy is also conserved. Each executive must give this matter of supplemental machines for personnel much study. There is room for great savings in this field.

Modernizing the Technique

The elimination of carelessness so that maintenance personnel can be reduced is a task that requires constant attention. If we can have fewer windows broken we shall be able to save money. The inference is clear.

Changing techniques for handling auxiliary agencies are matters to which much study can be given. In one system of 12,000 pupils there were three expert librarians. One of them resigned and the other two carried on the work with equal if not better efficiency for the rest of the year and for also an entire second year as well—but they changed their technique. They employed pupils to do certain minor tasks. The new method saved the system money—and the pupils earned money.

In public school lunch management, likewise, study must be given to a reduction of costs. The records of one school system show that 125,054 meals were served in one year at an average cost of 18 cents a meal. In addition, 1,685 persons were served at banquets and dinners. Nineteen full-time adults were employed at an average wage of $16 a week. There were ten part-time employees at an average wage of $6.87 a week. There were also 108 pupil employees who received a hot lunch for their services—besides much practical training. The net result was that all of the pupils benefited because of the reduction in the costs of operation.

$50,000 to Be Distributed to Ohio's Needy School Children

A sum of $50,000 has been released by the Ohio General Assembly and Gov. George White to give relief to needy school children. This sum was apart from the regular state equalization fund. Dr. J. L. Clifton, director of education, has placed E. O. Braught, division of child accounting, state department of education, in charge of the fund.

In a letter to county superintendents from the state department of education, plans were outlined for distribution of this relief money. Among some of the instructions are:

Blanks are to be filled out by the teacher or the attendance officer who has made a thorough investigation of the case.

The price of shoes is limited to $2.50 a pair.

Food, clothing or books must not be listed unless the need is acute and cannot be cared for by other agencies.

Merchants should be required to do what they can to reduce prices of articles, and to take no profit beyond the cost of doing business.

All obligations will be paid for by the local district after the applications and invoices have been approved by the director of education.

The cost of the articles must be kept to the barest minimum.

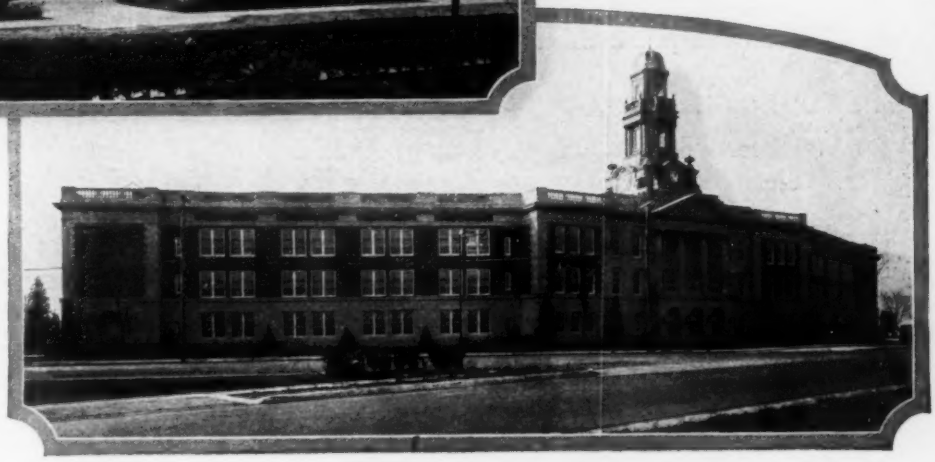
Approval of the director of education must be obtained before the purchases are made.

All forms should be turned in to the county superintendent.

(Left)
FLORAL PARK-BELLEROSE SCHOOL,
Floral Park, Long Island, New York.

Architect:
EDWARD HAHN, Hempstead,
Long Island.

Contractor:
JAMES MCCULLAGH CO.,
Hicksville, Long Island.



(Right)
SEWANHAKA CENTRAL HIGH SCHOOL,
Floral Park, Long Island, New York.

Architect and Engineer:
KNAPPE & MORRIS, New York.

Contractor:
JOHNSTON HEATING CO., New York.

Install PeerVents in the old school building as well as in the new

DURING the summer vacation when you are repairing and remodeling your school buildings, why not have PeerVent Heating and Ventilating Units installed in all the classrooms? This installation is easily made. Existing piping can be used for the new units. For the air intake, small openings are provided through the wall directly back of the unit, or if necessary, the air inlets are brought in just above the window sill.

Every installation has individual engineering attention, based on PeerVent's many years of experience in the heating and ventilation field. Take advantage of this excellent service and benefit from PeerVent's many years of experience. As you know, PeerVent was the pioneer in Unit Ventilation. The first PeerVent, built 20 years ago, was then based on 22 years of experience.

The PeerVent System gives perfect results in connection with any high pressure, vapor, vacuum, gravity or modulation steam heating systems.

PeerVent Engineers will gladly furnish estimates and submit preliminary plans. Write for the Peerless Catalog.

PEERLESS UNIT VENTILATION CO., Inc.
BRIDGEPORT, CONNECTICUT
Pioneers in Unit Ventilation
Resident Engineers in Principal Cities from Coast to Coast

Schoolhouse Planning:

How to Determine the Building's Instructional Efficiency

By ARTHUR B. MOEHLMAN, Professor of School Administration and Supervision, School of Education, University of Michigan

THE second factor in the group of seven that determine the retention or rejection of an existing building in the ultimate school plant is instructional efficiency.

It is impossible to-day to determine the exact direct contribution a physical plant may make to the efficiency of instruction. Certain assumptions must be made which have not actually been proved through experimentation and research. In determining instructional efficiency at the present time the problem must be considered in terms of the mechanical fitness of the building to facilitate the instructional program. The approach should always be in terms of adopted educational policies upon the basis of the curricular needs and certain well recognized, if not objectively established, assumptions. These may be grouped as health, curricular fit and mechanical factors.

The first element under appraisal for health factors is safety. A building may be mechanically sound, cheap in upkeep and reasonable in operation cost, yet the entire structure may possess elements that make it a dangerous place in which to keep children. Safety is inherent in the type of construction materials and in the character of the basic design. They must be considered in combination. For example, a one-story frame or brick and wood-joist construction where every room opens to the outside and only a fraction of a minute is required to empty the school in case of need, might be considered a safe unit. On the other hand, the same construction in a two or three-story building would present an exceedingly dangerous hazard to life and limb.

If There Is a Fire, What Happens?

Since the immediate danger in every building comes from panic rather than from fire, the type of plan and the story height enter into consideration in every judgment. A multiple storied building may be of fireproof construction but it may not have clear corridors, panic coves or any means of taking the children quickly to the outside.

In appraising an existing building with respect to safety eight criteria may be employed. The first of these is the time required to empty a building in an emergency without creating fear or panic among the children. In general, it should be possible to clear a school within three minutes. It should not under any conditions take more than five. I consider three minutes the optimum time. Whether or not a building can be cleared quickly is determined to a great extent by the basic plan, but it is also dependent upon careful administration and upon regular fire or emergency drills. Unless the children have been carefully trained in the habit of getting out quietly and quickly the best planned physical plan may not meet the situation.

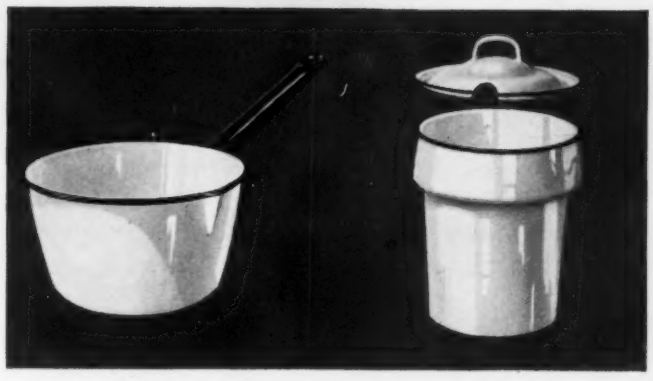
Hazard Increases With Height

In a study of the time required for emptying a building, the second, third and fourth criteria—height, corridors and exits—must be considered. Hazard increases directly with height. Every stairway must be considered as a distinct hazard. The ideally safe building would be the one-story type. For many reasons, such a building cannot be economically designed in the northern sections and in urban districts where the site cost is high. The next best type would be the two-story building and this represents a distinct value both in safety and in ease of instructional administration. Many districts consider the three-story building more economical to design, and this type is still predominant in the secondary field. Elementary buildings of two stories are gaining a strong following and there is now even a strong tendency towards the two-story secondary school. Every story beyond three increases the hazard greatly. In rating buildings for height, I generally give the one-story a value of five, the two-story a value of four, the three-story, three, and the next two story heights, two and one. Buildings higher than five stories are rated at zero.

Corridors must next be studied. They must be

★

GOOD FOOD FROM SHINING WHITE DEPTHS



The dipping-up of good food from the white depths of Vollrath utensils is a pleasure to both the waiting school-child and the server. Vollrath Ware is lustrous . . . snow-white . . . clean looking. It makes foods look doubly attractive. Then afterwards, mere soap and water renew its brightness absolutely. Scouring and polishing a Vollrath dish are never necessary.

School lunch-rooms need these meat platters and bake pans that are seamless, brilliant, glass-hard. They need these soup tureens and gravy boats, these vegetable insets for steam tables, that are rounded and smooth inside and out . . . that will not absorb acids, stains or odors. They need these ring-kettles that are resistant to blows.

The surface of Vollrath Ware is three coats of finest enamel fused at 1800° F. to a heavy gauge steel base. The resulting thickness keeps foods hot a surprising length of time; helps cooking; and of course makes the entire utensil extremely durable. Handles, spouts and other attachments are gas-welded on, and cannot tear apart. There are no rivets. Each utensil is superbly sanitary.

The lunch-rooms of schools, hotels, business houses have complete Vollrath equipments. Countless domestic science kitchens rely on no other ware. Write for folders and prices. The Vollrath Co., Sheboygan, Wisconsin, established 1874.

The Vollrath name in this form on the label assures you of genuine Vollrath Ware.

VOLLRATH WARE

wide enough to carry the traffic from rooms on both sides so that the building may be quickly emptied without traffic jams. Elementary school corridors should be approximately 12 feet in the clear and secondary school corridors 14 feet in the clear. The plan should be so designed that corridors end in exits. Any child, stepping from a room, must be able to see an exit in at least one direction. Doors leading from classrooms may be recessed in the breather wall so that when they are open the corridor is clear. If the doors are hung on the outside wall it is necessary to increase the width of the corridor to provide for the space the door consumes in swinging out.

Exits may be provided in sufficient number so that each first floor corridor ends in a door to the outside. This excludes service and operating corridors, used exclusively by the professional personnel. If large capacity units are centered it is desirable to provide adequate exits closely related to these traffic requirements. Second and third-floor corridors should end in a stairway. It is not of major importance whether these stairs are placed directly at the end of each hall or at right angles to it and carefully inclosed with fireproofed material.

The next criterion is the presence of panic coves. Entries having square corners or end pockets may easily produce disaster by causing children to crowd against the walls just before they reach the outside doors. This situation may be treated either by hanging the outside doors so close to the end wall that no pocket exists or by providing angled or curved corners to prevent any jamming against the wall.

Stairways may be considered next. As stated earlier, they should terminate every corridor end, either directly or at right angles. The better practice to-day insists upon fireproofed inclosures, which will ensure a protected exit to children above the first floor. Stair treads must be wide and risers not too high. The use of nonslip treads is indicated. Stairs may be so planned that each child is provided with a handrail to prevent his falling because of pressure or pushing from behind.

Fireproofing the Building

The degree to which a building can be fireproofed must be studied. Every school building above one story in height is more satisfactory if it is designed for the elimination of fire hazards. Even our so-called fireproof buildings are not completely fireproof because they have wood or composition floors, wood trim and storage cabinets and, generally, wooden furniture. Papers and books cannot be eliminated, and they add to the potential fire hazard. Fireproof construction, plus corridor standpipes and chemical extinguishers will reduce this hazard to a minimum. In the modern structure panic is the chief factor to be guarded against, and this will depend upon the skill with which the physical plan has been evolved and the method of administration.

Heating and Ventilating With Regard to Health

The location of the heating plant should be considered. High pressure plants should never be in the building itself but in a detached unit. Location of low pressure plants is not of such great importance and the general practice, for reasons of economy, tends toward placing them within the building. While they do not present anything like the risk of high pressure plants, it is still desirable to place them outside the main structure.

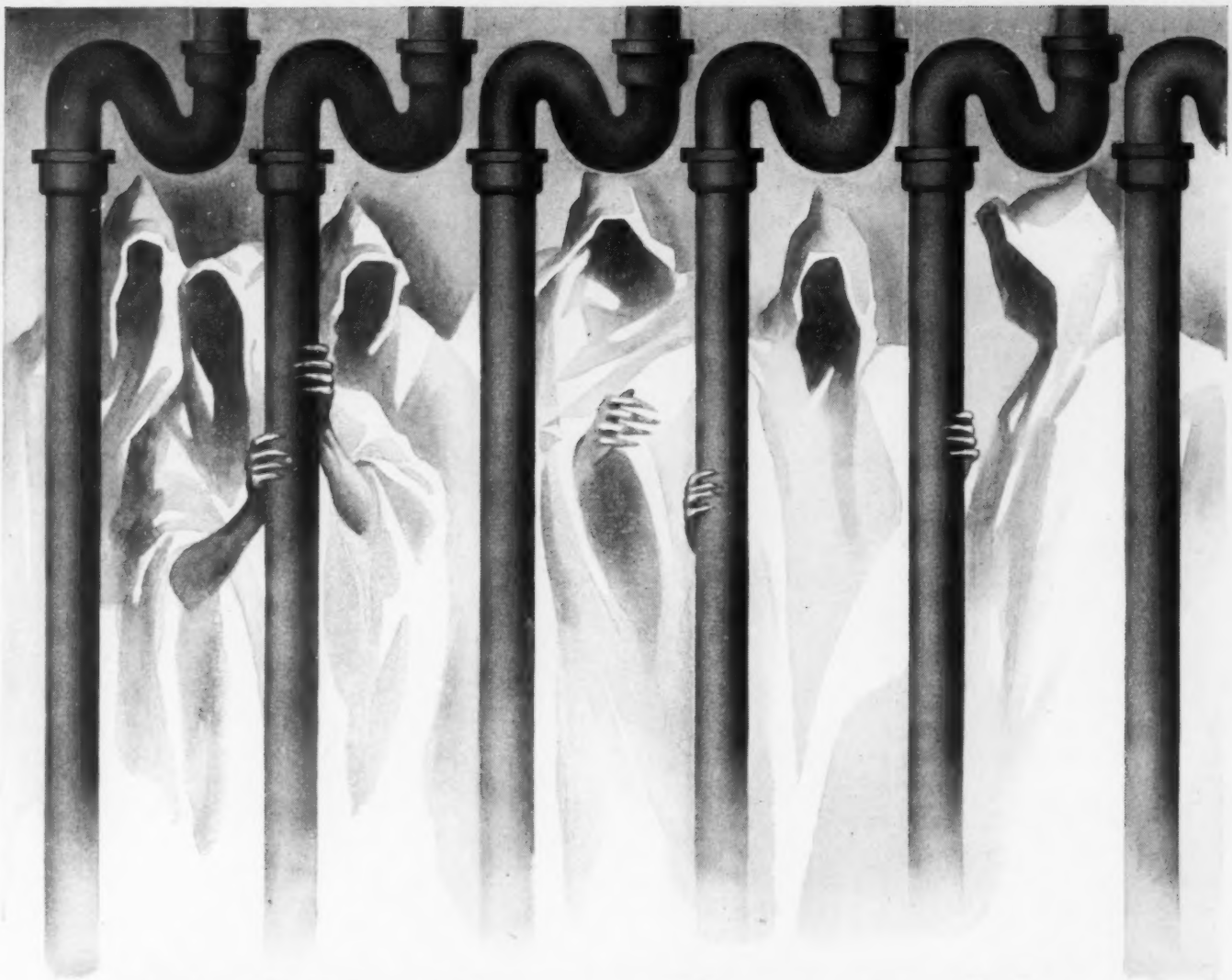
Heating and ventilating must be considered in school plant appraisal in terms of the health factors underlying plant efficiency. The actual experimental evidence with respect to the desirable standards in heating and ventilating and the effect of various methods under classroom conditions is slight. Most of our present day standards in this field are based upon assumptions derived from incomplete and unsatisfactory experiments with respect to technique and control of all the variables involved. There is no final answer to the question at present. Existing standards for appraisal are largely those that have been written into state and local building codes and are therefore legal standards that must be met, regardless of their ultimate validity.

The method of appraisal consists largely in a determination of code requirements and in the application of these standards to existing conditions. Few of the older plants meet the legal requirements. Appraisal of these with respect to heating and ventilating is bound to be low. Apart from the legal factors it is difficult to say just how much weight to attach to these findings.

The last health factors are sanitation and plumbing. Again, many of these standards with respect to both quality and number are determined by legal enactment and are therefore quite rigid. Their location and convenience in administration should be determined by instructional and administrative policies.

After all of these criteria have been carefully studied the existing plant may be rated as good, fair or poor. This rating, when combined with other factors, will determine the final appraisal of a given structure.

The second group of factors to be considered in judging instructional efficiency has to do with curricular fit. The method of procedure consists



Making Bars That Hold

Of all the fixtures and fittings that go into a building, none is so susceptible to trouble as the plumbing.

It is often used by countless, careless, unthinking and even unclean people. Yet the fixtures must function perfectly through many years to come, if they are to repel the grim, ghostly shadows that haunt all such places as public toilet rooms.

The cost of attaining and maintaining such sanitation is far easier and far cheaper than many imagine.

Firstly: repair and replacement costs are closely allied with unsanitation. *Secondly:* all three are natural results of fixtures not designed and constructed to meet the jobs assigned them.

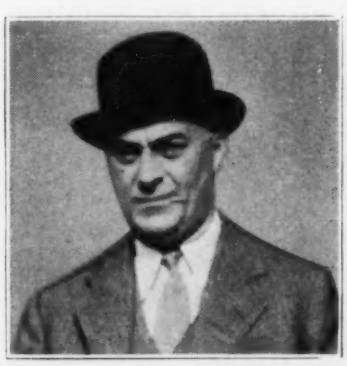
The answer is to find the plumbing fixtures that are built expressly for your particular jobs.

There is such a line, developed by the Clow Soldier of Sanitation to be the most complete in the world. It embraces every conceivable type of fixture, not only for dwellings but for schools, hospitals, industrial plants, public buildings and institutions.

It ranges from simple drain cocks to complicated hydro-therapeutic equipment for modern hospitals.

If you would put the grim ghosts behind bars for all time, call in the Clow Soldier of Sanitation. That line is at his back—and at his finger tips is the 52 years of accrued experience in handling the most acute sanitation problems.

Call him in—



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of developing the curricular needs in tabular form in terms of type of rooms, number of rooms, capacities required and location for ease in administration.

These tables may be developed by course of study divisions, such as health, languages, exact sciences, social studies, fine arts and vocational and administration facilities.

Suiting the Building to the Curriculum

The average size of the classes, the number of classes, the weekly capacity required and the total number of rooms may be tabulated under each of these divisions. In like manner, the existing accommodations in each building may be tabulated and checked against the outline of needs. The relative efficiency of the existing plant to meet these needs may be so determined. If the curricular fit is good, the existing plant may be so graded. If the fit is only fair or poor, it is necessary to study the third group of factors to determine whether this low curricular fit rating may be considered as final or whether it may be subject to change.

The third group of factors includes the mechanical factors of flexibility and expansibility. The curricular fit has established what the actual requirements will be. Judgment of flexibility and expansibility will finally determine whether these may be satisfactorily met. Two elements in the educational process are subject to almost constant change. They are the number requirements and the type of space requirements. Our populations are not constant. Practically every urban community to-day retains some of its frontier characteristics. Compared with most European and British cities, which are thoroughly well established and apparently permanent in character, our cities are constantly in flux. No one knows at any given time exactly what the future demands upon any plant will be. While this may be determined within general limits, any specific situation must be considered as not subject to exact prognostication.

The means by which this variable may be provided for to a great extent is through the factor of expansibility. It is therefore vital before making final appraisal of any section of the existing plant to study the plan to determine what its elements of flexibility are. Generally speaking, the closed type plan is relatively inexpansible. Beyond a given point (the complete square or rectangle) future addition can be made only at excessive cost. Open plans, of the T, I, U, E or L types, are relatively expansible. If correctly designed originally, they may be added to at relatively little expense. In addition to the basic plan type the factor of age also enters into the appraisal for flexibility. The consideration is whether, in terms of the general mechanical condition of the plant, it is desirable to add to it even though the plan is expansible.

The factor of flexibility determines whether the existing plant can be made to fit existing and projected curricular needs. Flexibility relates to the ease with which the internal plan may be readjusted and redesigned to provide adequate facilities for essential class work. In general, the older buildings are inflexible. Many of these were designed with cloakrooms and ventilating ducts in the front or back of the classroom. To change these classrooms would require such extensive alterations in heating, lighting and sometimes in the supporting walls that it would be much cheaper to build a new plant. Buildings designed upon the basis of unit construction, with a breather wall, where all lighting, heating and ventilating service is designed in specific units, are relatively flexible and may be changed at a minimum cost to meet new needs. Where the factor of flexibility is present, it is no great task to redesign portions of the plant to meet curricular requirements and so change the initially low rating developed in terms of curricular fit.

Since it is now impossible to determine directly the actual effect a building has upon the efficiency of instruction, it is necessary in appraising the existing plant to judge a building indirectly in terms of instructional efficiency, satisfying as far as possible the mechanical requirements essential to the housing of the instructional program. These three groups of factors may be considered as health, curricular fit and the mechanical factors related to the teaching program. All three factors may be considered separately and then combined in relation to each other to secure a definite and composite rating of the existing plant with respect to instructional efficiency.

School Not Liable for Injuries in Collapse of Bleachers

In a recent opinion, Gilbert Bettman, attorney general for Ohio, held that neither a school district nor the board of education for such district is liable for injuries received by patrons of a football game caused by reason of the collapse of bleachers or otherwise while on the playgrounds under the jurisdiction of the school district.

It is immaterial, he ruled, that the spectators are charged an admission fee and thereby there is an incidental monetary return from the game that is played.

A TIMELY LETTER TO THE SCHOOL SUPERINTENDENT

Do you think of Stedman Rubber Floors as high priced? They are not. All commodity prices are down. Crude rubber which cost 27 cents a pound in 1929 is now less than one-third of its former cost. This drastic reduction, which has affected other raw materials, means a lower price than ever before for this fine flooring.

Consider what you get when you buy Stedman Reinforced * Rubber Floors. Savings in replacement charges; because they wear so long;—savings in maintenance costs because they are so easy to care for; constant freshness and beauty, silence and comfort. In Stedman Floors all the recognized modern advantages of rubber flooring are intensified by the exclusive Stedman method of Reinforcement.

We are waiting for you to ask us to share with you our experience as pioneer makers of reinforced rubber tiles. We are at your service for advice and assistance in your flooring problems, without charge. Let us send you full and complete information, sample tiles and color charts—no obligation. May we hear from you?

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* REINFORCED: In the Stedman Process minute cotton filaments, uniting with the rubber under high pressure and heat, are responsible for its unusual resistance to wear and distention, its lasting resilience and smooth impervious surface—characterized by color veinings of great fineness and beauty.

A Study in Lowell House, Harvard College, Cambridge, Mass. Coolidge, Shepley, Bulfinch and Abbott, Architects. Floor laid in rectangles of O. S. Red with Cream interliners.

*Your Everyday Problems**:

Protecting Public School Funds at All Times

By JOHN GUY FOWLKES, Professor of Education, University of Wisconsin

FOR many years it has been apparent that public school funds do not get the protection afforded the money invested in a commercial organization.

In times of prosperity, failure to guard school funds is usually passed unnoticed by the administrator, board member and taxpayer alike. In times of depression, however, the hazards surrounding school monies are decidedly more serious than during normal or boom periods and consequently general agitation over the safeguarding of all money is raised in many communities. As a matter of fact there is no reason why school funds should not be carefully protected at all times.

The following news item presents in a striking fashion the danger attending school money at present.

> "The boys and girls of the schools of ——— stand to lose nearly $3,000 through the failure of the bank in which the school savings were deposited, according to information received from that city. The total deposits on the day the bank closed were approximately $6,000, part of which will be saved through the reorganization plan. The ——— school savings plan was sponsored by ——— Company, which organization, however, does not offer protection by insurance or bond to its depositors."

Similar news items are available concerning the loss of not only the savings accounts of school children, but the loss of the entire school district's funds. Surely, when school boards, superintendents and principals accept the keeping of both public and private funds, they should take the utmost care in protecting such funds. Smaller communities particularly should make sure of the financial position of their public schools. The following discussion shows how a small community in Wisconsin has recognized the problem and attempted to meet it. While the solution may not be a perfect one, it is certainly a step in the right direction.

For the past decade the school district of a midwestern community has been doing business with the same bank. A bank directors' bond was furnished by the bank as security for the school's deposits, and no interest was paid by the bank on the district's deposits. Banking relations between the bank and the school board were both pleasant and successful. But uncertainty over the general financial situation during the present period of unemployment and depression inevitably raised doubt in the minds of the board members and the superintendent concerning the stability of the bank. The community has seen many small banks near by meet depression with frozen assets and close their doors to the business world. To the individual, the loss of deposits or savings is truly serious, but it can hardly be compared with a similar situation with respect to school funds where the board is entrusted with public money.

A Difficult Situation

The problem was twofold. In the first place the school reserve has increased over a period of years until on July 1, 1931, it will have reached approximately $20,000, and it was found that the average monthly school account on deposit was nearly $16,000. In the second place, the school savings deposits of nearly $1,000 a year were being handled by the same bank. The bank accepted this thrift savings account for the school largely because of its long business standing with the school district. The savings account involved a great deal of clerical work with little if any financial gain to the bank. The situation was further complicated by the fact that on investigation the bond with the directors of the bank was found to have names of men who now have no connection with the bank. Furthermore, the bond did not cover the children's savings. This last item undoubtedly was the main reason for pushing the matter of security, due to the fact that a bank failure and loss of deposits by the children might produce an unfortunate attitude in these children toward future saving.

*Discussions in this department deal with problems that frequently confront principals and superintendents. Inquiries on problems of this nature should be addressed to Doctor Fowlkes.

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The first proposal of the school board was to ask the bank for a new directors' bond to cover both the district deposits and the children's savings. On deliberation it was concluded that a bond of this nature meant little, inasmuch as the directors' circumstances would be inflated if the bank closed its doors, and it would be necessary for the school district to take its place beside other depositors. Next, a bond through a bonding company was considered. Application was made through a local bonding agency for a bond covering the school deposits and the savings deposits, the board paying for the bond, but this was found to be expensive. The bank was then asked to furnish a bond of its own making covering all school funds. After much delay, the bank informed the board that such a bond could not be given, and after investigation this was found to be true because of credit relationships of the bank at the time.

How the New Banking Plan Functioned

It was then proposed by the board that other banks take the school funds, giving bonds for them, but no bank was anxious to take over the savings system because of the clerical burden, and the bank with which the board was doing business refused to keep the savings account unless it was permitted to keep the entire school deposits. Withdrawal of all school money from the bank and investing it in municipal or liberty bonds and keeping only a small depository account for checking for monthly bills was then considered. Under this plan the children's savings would be invested and the details of banking would be handled at the central office of the school. This procedure would lead to many complications in withdrawing savings and would involve much clerical service. It was practically agreed to change banks for the school district money and to handle the savings system through the school office. This, however, led to a final proposal by the old bank which settled the matter satisfactorily, at least temporarily. The bank no doubt feared the withdrawal of the school funds since such a step might lead to public misinterpretation of the financial status of the bank.

The first proposal of the bank was the joint purchase by the school district and by the bank of liberty bonds to cover the deposits. The bonds were to be placed in a metropolitan bank, and released by the school board as deposits decreased. This was not satisfactory, however, because joint ownership would give the school only 50 per cent security, and would not meet the state banking commission's acceptance of the bank's statement. The second proposal was similar in that it involved the purchase of liberty bonds. The plan was briefly as follows: (1) The bank acted as an agent for the school district in buying liberty bonds in the name of the school district (the district being the sole owner) for an amount equal to the district's deposit in the bank, less $2,000, the bonds to be deposited in a reliable metropolitan bank. (2) The school was to pay only par value of the bonds, the bank standing the gain or loss of the buying. In other words, the bonds were worth $100 per $100 deposit at all times whether the market price of the bonds was $97 or $103, but the bank was to receive the interest on the bonds. (3) The liberty bonds could be released only by the board of education in favor of the bank when the school's checking account decreased. The deposit and bonds (par value) were always to be equal. The school district's deposit in the bank, including the savings of the children, must always equal $2,000. (4) The $3,000, of which $1,000 was savings, was covered by a bank directors' bond.

The arrangement was drawn up jointly through the bank's and the school district's attorneys. It is believed that the arrangement is quite satisfactory and has accomplished more than it was originally planned to accomplish. The advantages are: (1) The plan adopted gives adequate protection to both the board of education and the bank in the handling of the district's money; (2) it has made it possible to continue the school savings system which in its early organization is not attractive to any bank because of the large amount of clerical work involved; (3) it has helped the old bank which has been faithful and helpful in the past decade in its business relations to keep its stability during a trying time until the financial situation is more uniform and bonding houses are satisfied with its credit.

Where Eighth Graders Learn the Essentials of Good Housing

A course in housing is being offered this year for a second time in the eighth grade of the Cincinnati Public Schools, according to the *Survey*.

Two courses are available—one for suburban children who take air and space for granted, to acquaint them with the unfamiliar conditions of congestion and awaken their social responsibility; the other for children in the congested districts who take crowding and lack of sanitation similarly for granted, to stimulate a desire for better housing.

The essentials of good housing—construction, repair, location, ventilation, fire escapes, plumbing, necessary space—and the forces that tend to create bad housing are explained, with the need and the method of control.

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Where Do You Plan to Study This Summer?

Courses for superintendents, principals and supervisors figure prominently in the summer session programs that are being offered by the leading colleges and universities of the country

A LARGE proportion of school executives throughout the country spend a part of the long vacation in advanced study in universities or teachers' colleges. The opportunities for attractive and profitable study during the summer make it possible now for anyone to devote a few weeks every summer very pleasantly to study in any field in which he may be interested. Many of the universities and teachers' colleges are emphasizing work in education during the summer session. They are providing unusually inviting features for school executives and teachers.

In order that its readers may be informed concerning the facilities for summer study in the leading universities and teachers' colleges, The NATION'S SCHOOLS requested the dean of the summer session or of the school of education in each institution to prepare an account of the courses and features that would be of particular interest to executives. Brief outlines of the courses offered at the different institutions follow.

University of California, Berkeley: In the University of California summer session for 1931 educators will find the following work from which to choose: basic courses in theory, psychology and principles, with such professors as G. S. Browne, University of Melbourne; Fletcher H. Swift, University of California; Guy T. Buswell, University of Chicago; G. M. Ruch, University of California; Louis L. Thurston, University of Chicago; Bessie Gambrill, Yale University; Francis D. Curtis, University of Michigan.

A three weeks' conference is to be held for school superintendents from July 6 to 17 inclusive. This work will carry no university credit but a certificate recording the completion of the work will be issued upon request.

There are to be graduate courses in psychology, elementary curriculum, administration, school finance, school surveys, vocational education, secondary education and special problems in teaching science.

For the Play School Dr. Daisy Hetherington has chosen an expert group to work with her in this field.

The work in adult education has been arranged to include international barriers, controversial problems, parental education and community art.

The division of vocational education is offering work in theory, guidance, administration and special problems in the field of business training, cooperative education, civic and employment relationships.

The Catholic University of America, Washington, D. C.: About seventy courses more than last year will be given, or a total of 213 courses. This increase represents for the most part additional courses of graduate grade.

Demonstration classes of all elementary grades will be available for all courses which can effectively make use of them.

For the students in library science, the authorities of the public library of the city of Washington have consented to establish in the university library building a branch library to be used as a demonstration library.

While courses have been added to all departments of study, the following departments of study are represented for the first time: liturgy, Celtic, political science, expression and mechanics. The following departments, especially, have been expanded: religion, education and art.

The University of Chicago, Chicago: The following titles suggest the types of opportunities open to superintendents and principals: the school in the social order; public school organization, administration and supervision; constitutional and legal basis of public school administration; school costs; educational and vocational guidance; school buildings; the supervision of instruction in elementary schools; duties of school principals. In addition, a wide range of courses will be given in the field of the curriculum, educational psychol-

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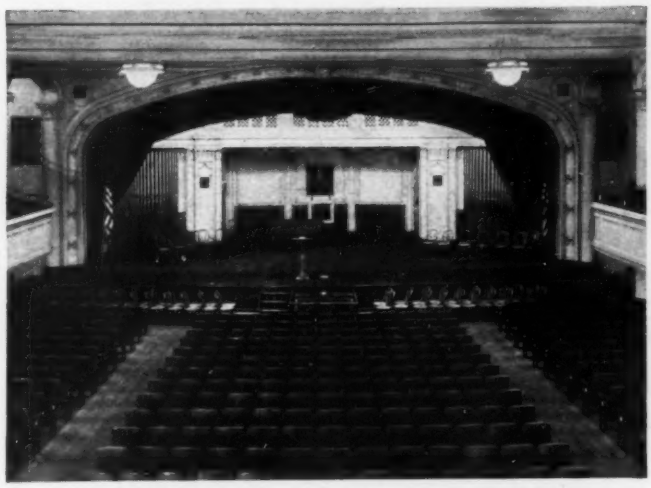

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RCA Centralized Radio supplies the auditorium and class rooms with perfect radio and record reproduction

RCA engineers design each installation to meet the special needs of the school. A national organization guarantees proper supervision of installation on the basis of broad experience in this specialized field.

RCA Centralized Radio has been installed in scores of schools to meet the growing demands and utility of radio as an educational force.

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ogy, tests and measurements, methods and supervision.

A special series of courses has been arranged for those interested in the mental and physical development of children and in the special problems that attach to atypical children.

Another series of courses has been arranged for college and administrative officers. The various types of problems in this field which will be considered are suggested by the following titles: Organization and administration of colleges and universities; financial administration of higher institutions; the junior college, its organization and administration; organization and administration of teacher training institutions. In addition to this sequence of courses, an institute for administrative officers of higher institutions will be held on July 8, 9 and 10.

University of Colorado, Boulder: Among the courses offered by resident and by visiting faculty members of interest to readers of The NATION'S SCHOOLS are: principles of education, public education, school management, rural education, history of education (United States, ancient, mediaeval and modern European), curriculum principles and construction, high school advisers' course, junior high school, extra-curricular activities, mental hygiene in education, principles of character education, cost and financing of education, adult education, education and a changing world.

More than 300 courses will be given each of the two quarters, the first being from June 22 to July 25, the second from July 27 to August 28. Sixty or more teachers from schools and universities outside the state will supplement a resident faculty of more than 125.

Colorado State Teachers College, Greeley: Particular attention is being given to courses designed especially to meet the requirements of superintendents, supervisors, principals and teachers anxious for professional advancement. Once again the college is conducting what is known as its unit courses. These this year will cover such subjects as current problems in education, self-surveys of school systems, homogeneous grouping in the secondary school, techniques of curriculum making, tests and measurements in the social studies, criticisms of current theories in education and the use of motion pictures in education.

In addition to the regular faculty which will serve during the summer quarter, the first half of which begins June 13 and the second half of which begins July 20, forty-one outstanding educators from institutions located in different parts of the country will serve as visiting faculty members.

Cornell University, Ithaca, N. Y.: The summer session of Cornell University will present a broad and valuable offering for school administrators. The division of education will have a faculty of some twenty instructors offering courses in educational administration and supervision, extra-classroom activities, vocation and educational guidance, educational tests and measurements, history and philosophy of education together with a complete program in rural education and rural social organization.

Special inducements involving remission of tuition fee are offered to graduate students who are candidates either for the M.A. or the Ph.D. degree.

Duke University, Durham, N. C.: The summer school, June 12 to August 31, will offer work in American college problems, under the supervision of Dr. A. M. Stowe, for some time president of the University of the City of Toledo, and author of "Modernizing the College." Most of the work, however, in this summer school consists of offerings for superintendents, high school principals and supervisors of elementary schools, the graduate work being concentrated largely in courses related to administration and supervision.

Indiana University, Bloomington: Teachers and school administrators will find a wide variety of professional courses offered during the summer session beginning June 13 and continuing until August 9. The courses offered are sufficient to meet the professional certificate requirements for elementary, high school, special, supervisory, and administrative positions. In addition to the regular certificate courses, especial emphasis is placed upon training in four particular fields: health and physical education, coaching, school library science and graduate research study.

The regular faculty is supplemented by a number of successful school administrators and educators.

Following the close of the regular summer session a special three weeks' session will be held from August 13 to August 29. Selected courses in education will be offered, making it possible for students to obtain ten semester hours of credit in twelve weeks.

University of Kentucky, Lexington: The University of Kentucky, one of the first institutions to offer courses in higher education during the summer session, again offers courses for college registrars, college deans and college presidents. These courses will be under the immediate direction of President Frank L. McVey and Prof. Ezra L. Gillis, registrar.

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On this style, the solid wood back is rodded and bolted, reinforced in a manner which assures longer and more satisfying wear than any other type. The seat, too, is of solid wood to prevent chipping, marring, etc. The all steel, self-aligning, roller bearing hinge may be jumped upon and placed under the most terrific strain, yet it will operate quietly and efficiently.

Hundreds of thousands of H-W chairs have been installed in school auditoriums throughout America. Again and again, they have been selected by careful, capable school boards because of their rugged, practical, troubleproof construction. If you are planning to seat a new school auditorium or reseat an old one, be sure to call in a representative from Heywood-Wakefield. These experienced men will be glad to demonstrate every detail of auditorium seats, submit seating plans, and furnish helpful suggestions without cost or obligation on your part. Simply drop a note to the nearest H-W Sales Office.

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HEYWOOD-WAKEFIELD

The university also offers a library training program to satisfy the requirements of the Southern Association of Colleges and Secondary Schools. This program has been worked out in cooperation with the American Library Association.

In addition to these special features the summer session will offer programs of work of interest to supervisors and county and city superintendents. The graduate school program also has been greatly enlarged to meet the needs of a rapidly growing graduate student group.

The new university training school, completed in the summer of 1930, will be opened for summer session work for the first time. A nursery school will also be maintained through the summer for those who are interested in preschool and parental education.

University of Minnesota, Minneapolis: The summer session of the college of education, University of Minnesota, will consist of two six-week terms, the first to begin June 17 and the second, July 27.

During the first summer session a three-credit course of lectures will be offered under the title of "Foundations for Educational Thinking." The lectures will cover those phases of biological, psychological and mathematical sciences that relate to education. Guest instructors who will give lectures in this course are Professors C. J. Herrick, University of Chicago, H. S. Jennings, Johns Hopkins University, R. A. Scammon, University of Chicago, C. P. Stone, Stanford University, and Herbert Woodrow, University of Illinois.

Two other features of the first summer session are "Problems of College Education" by Dr. Homer P. Rainey, president, Franklin College, and "Art Appreciation With Public School Application" by Alice Schoelkopf, head of the art department, Lincoln School, Teachers College, Columbia University.

All professors on the college of education staff will be in residence during both summer sessions. Visiting instructors in addition to those mentioned are Dr. C. L. Thiele, director of exact sciences, Detroit Public Schools, Dr. C. P. Archer, professor of education, Moorhead Teachers College, and Dr. John Bohan, professor of educational psychology, University of West Virginia.

University of Nebraska, Lincoln: In the school of administration and supervision, the courses in the main are graduate courses and lead to advanced degrees. The teaching personnel is composed of the regular departmental staff, leading administrators in the field and outstanding experts in school administration. It is the policy to bring to the university each summer specialists in one or more phases of school administration.

This coming summer Dr. C. E. Reeves, Elmira College, Elmira, N. Y., will have charge of courses in the care and operation of school plants, and Dr. H. H. Linn, Muskegon, Mich., will offer work in the business management of school systems. Special opportunities are offered for study along the line of child accounting, business management, building construction, supervision, and the care and operation of school plants.

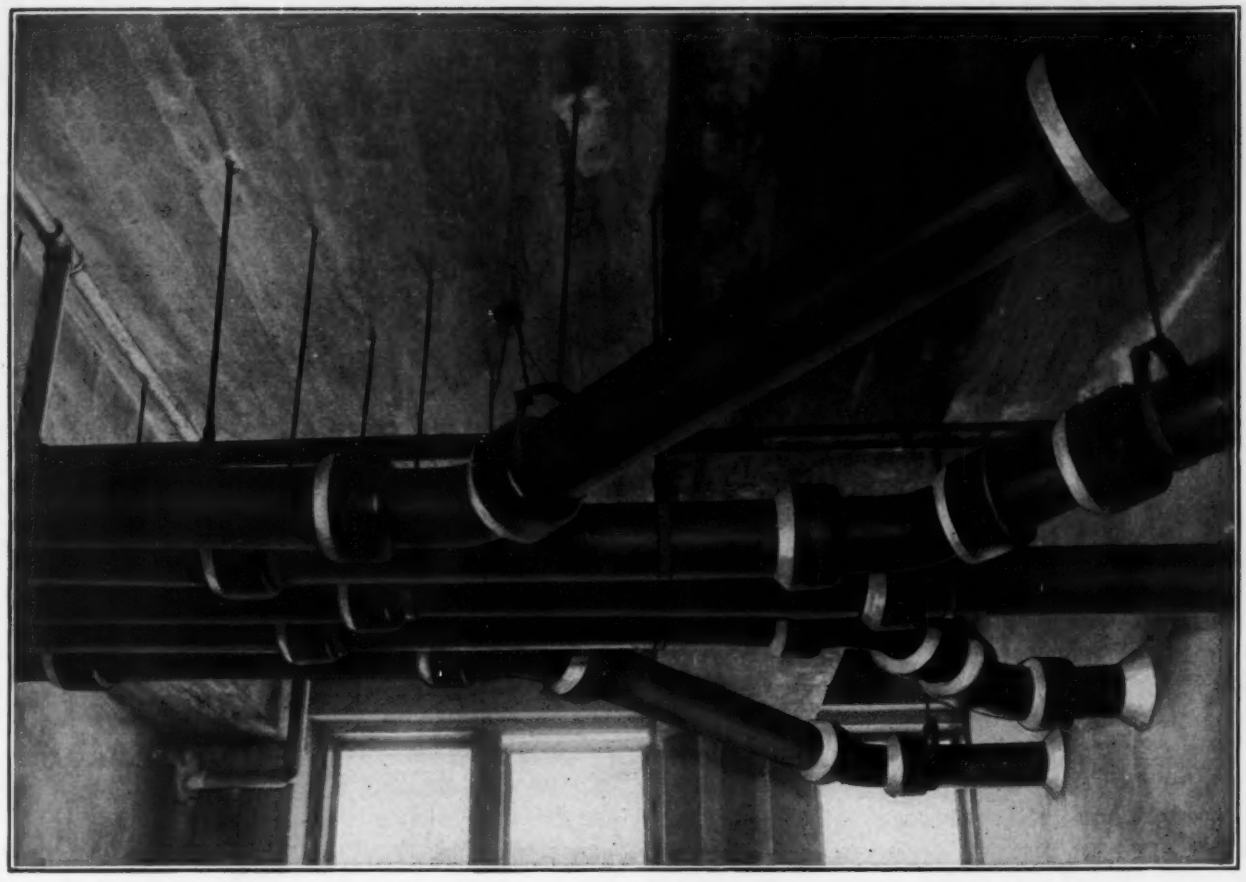
Stanford University, California: The selection of Los Angeles as the meeting place of the N. E. A. promises a big summer educationally on the Pacific Coast. Stanford has planned a strong program for teachers and administrators. Among its visiting professors are Norman Fenton, director, California Bureau of Juvenile Research; Henry D. Sheldon, dean of education, University of Oregon; George M. Wiley, assistant commissioner of secondary education, New York; Peter L. Spencer, commissioner of education, the Philippine Islands; Walter L. Bachrodt, superintendent of schools, San Jose, Calif.; Andrew P. Hill, chief, California Division of Schoolhouse Planning.

The courses are intended chiefly for advanced and graduate students. They comprise a wide range of interests. There are courses for deans, counselors, principals, superintendents and college teachers. Among the timely subjects that have been recognized in the program are curriculum construction, adult education, the platoon school, college teaching, the junior college and supervision. The usual courses leading to advanced degrees are also offered: the M.A., the Ph.D., and the Ed.D. This last is proving immensely satisfactory, and experience shows that it meets a genuine professional need.

The dates of the session are June 18 to August 15.

University of Southern California, Los Angeles: Many of the sessions of the National Education Association convention during the week of June 29, 1931, will be held on the campus of the University of Southern California.

Teachers, principals and superintendents will be interested to know that the University of Southern California is offering courses in administration and supervision as follows: school organization and administration, introductory course, by Dr. Frank O. Evans, director, division of administrative research, Los Angeles City Schools, and by Willard E. Givens, superintendent of schools, Oakland; organization and administration of elementary education, by Dr. Joseph Marr



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Gwinn, superintendent of schools, San Francisco; supervision of instruction, by Arthur S. Gist, president, Humboldt State Teachers College; school publicity, by Dr. Belmont Farley, assistant director, division of publications, National Education Association; school building administration, by Dr. John Guy Fowlkes, professor of education, University of Wisconsin; school surveys, by Dr. O. R. Hull, professor of educational administration, University of Southern California; federal and state school organization and administration, by Dr. Carleton H. Mann, formerly assistant superintendent of schools, Asheville, N. C.; city educational administration, by Doctor Gwinn and Doctor Fowlkes; public school business administration and school finance, by Dr. W. S. Ford, professor of education, University of Southern California.

A seminar in school administration will be given by Doctor Fowlkes and Doctor Gwinn, one in supervision, by Mr. Gist and one in educational administration, by Doctor Ford.

Equal opportunities for graduate study in other fields are offered. The first term of the summer session opens June 19 and closes July 25, with work given on three Saturdays. While everyone is advised to be present at the regular opening, those who cannot enter on university study until the close of the N. E. A. convention will be interested to know that the following courses have been arranged to meet their needs: city educational administration (special section sponsored by the National League of Teachers' Associations), by Doctor Ford; contemporary British and American poets, by Dr. Edwin Mims, professor of English, Vanderbilt University; contemporary world history (contemporary European problems), by Dr. Frank Bohn, lecturer on international relations and special feature writer for the *New York Times;* character education, by Dr. Edwin D. Starbuck, professor of philosophy, University of Southern California; social problems, by Dr. Edward Alsworth Ross, professor of sociology, University of Wisconsin.

University of Texas, Austin: The 1931 summer session at the University of Texas is divided into two terms: June 9 to July 20; and July 18 to August 31. The teaching staff is made up largely of regular faculty members supplemented by specialists from various parts of the United States and other countries.

The summer session is specially organized to take care of the needs of teachers and school executives. An extensive array of education courses is offered in each of the following departments: educational administration; educational psychology; history and philosophy of education and physical education.

Among the education courses offered of special interest to school executives are the following: vocational education; vocational and educational guidance; school organization and management; courses of study for high schools; educational organization; educational administration; the junior high school; sociological foundations; organization and administration of supervision; child accounting; educational statistics; education of the Spanish-speaking child; mental and educational measurement; the public school curriculum; the administration of extra-curricular activities; school buildings and equipment; the junior college; experimental problems in education; high school administration; administration and supervision of rural schools; problems of school support; state and county educational organization; individual differences and exceptional children; administration and supervision of physical education; thesis seminars; the philosophy of education.

Yale University, New Haven, Conn.: The department of education of Yale University will bring together this summer for the study of important problems in the field of education a small group of advanced students selected on the basis of scholastic record and professional achievement in the field.

The faculty, made up of leaders in important educational fields, will be composed of Boyd Henry Bode, professor of educational philosophy, Ohio State University; Walter Albert Jessup, president, University of Iowa; Truman Lee Kelley, professor of educational psychology and measurements, Harvard University; John W. Studebaker, superintendent of schools, Des Moines, Iowa; Edward Lee Thorndike, professor of educational psychology, Columbia University.

The work of the conference, for which credit toward advanced degrees may be earned, will be characterized by much freedom. There will be no courses in the ordinary sense of the term. Students of the conference will be divided into small groups and each student will have opportunity to do intensive work with each member of the faculty. The meetings of the conference will be held in the seminar rooms of the new Sterling Memorial Library, the resources of which will be available to the students. Living accommodations will be provided in one of the new residence halls of the university.

Application for admission should be made before May 1. The session lasts from July 6 to August 8.

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The thousands of educators who visited the Multiplex booth at the N. E. A. convention in Detroit unanimously voiced their approval of the Blackboard Multiplex.

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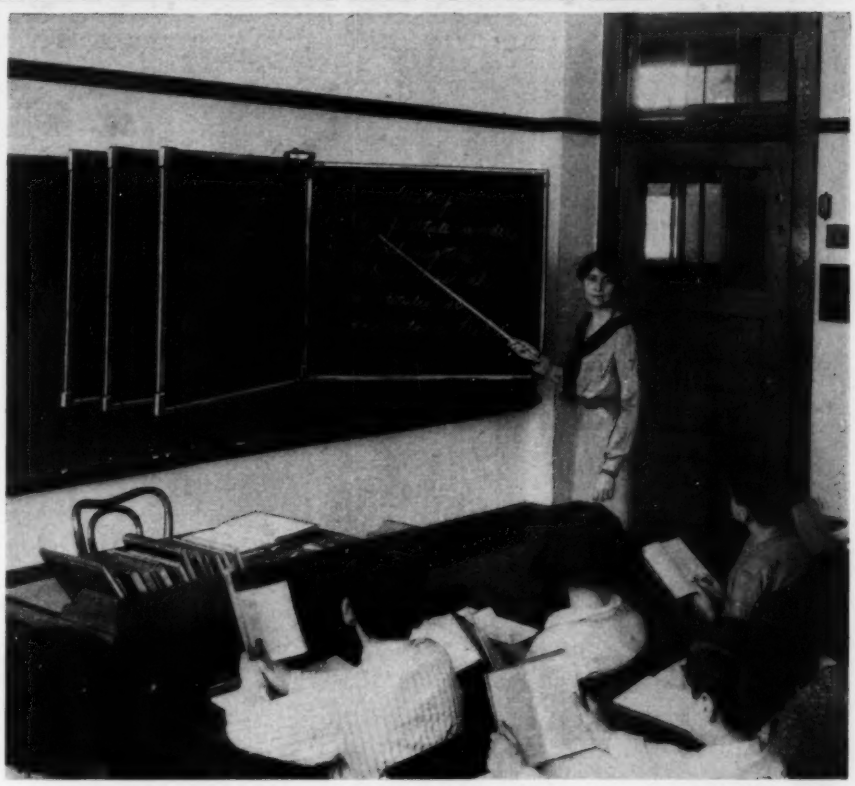

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News of the Month

North Central Association Discusses Economic Problems

The thirty-sixth annual meeting of the North Central Association of Colleges and Secondary Schools was held in Chicago, March 17 to 20, with a registration of over 800 educators representing high schools and colleges from every state.

In his presidential address, Merle Prunty, superintendent of schools, Tulsa, Okla., spoke of the economic crisis faced by colleges and schools as a result of the widespread financial depression. He urged that reduction in the salaries of educators should be used only as a last effort toward economies and pleaded for maintenance of salaries at their present level. "The financial situation confronting college and high school administrators is more grave than the necessity for economy confronting nearly any other group," the president said. "Two social factors, both beyond our control, have combined to complicate these problems. On the one hand we are confronted with an unprecedented popular demand for educational opportunities. On the other unfortunately we discover a disproportionate increase in the revenues to support the enlarged educational demand."

Enrollments Are Increasing

Secondary school enrollments in the north central territory have doubled in the last six years and those for colleges and universities practically have doubled in the last ten years, President Prunty pointed out. At the same time there has been little or no provision for larger budgets to accommodate this increase, he said.

At the banquet held on Thursday evening, Robert M. Hutchins, president, University of Chicago, also mentioned the effect on education of the economic slump. President Hutchins' remarks were devoted mainly to an explanation of the new educational plan at the University of Chicago and a description of the methods being employed there to harmonize the entrance standards under the new plan with those of other colleges and universities from which students transfer. The educational experiment being attempted by Chicago, he said, would not conflict with the standards of the North Central Association.

Prof. Thomas H. Briggs, Columbia University, spoke at the closing session, when he denounced high school and college education in the United States as a costly failure. He recommended the appointment of a national commission of educators to purge the school catalogues of unnecessary studies. "Whatever our ideals," Professor Briggs said, "we can never make education appropriate until we have clarified our philosophy. There are many principles on which there must be agreement, principles that if applied would revolutionize our practice and ensure far greater dividends than education has yet paid."

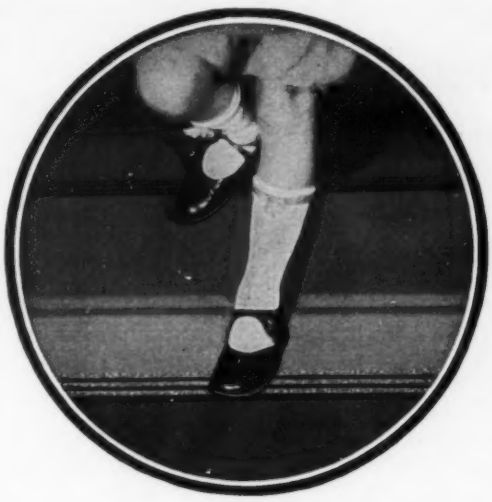
Numerous committee reports were presented at the convention, relating to standards for high schools, standards for colleges, athletic policies, entrance requirements, the scope of units in certain secondary school subjects and other matters of professional interest.

The following are the officers elected for the ensuing year: president, J. B. Edmonson, dean, school of education, University of Michigan; first vice-president, J. T. Giles, supervisor of high schools, State Department of Public Instruction, Madison, Wis.; second vice-president, G. W. Frasier, president, Colorado State Teachers College, Greeley, Colo. A. W. Clevenger, high school visitor, University of Illinois, who was elected secretary at a meeting of the executive committee, February 25, took office at the close of the meeting.

California School Business Officials Meet

The fourth annual convention of the Public School Business Officials' Association of California was held in Fresno, March 12, 13 and 14.

Representatives from various California schools numbered around seventy-five and the same number of exhibitors were present. Approximately a hundred visitors found the program interesting. Discussions included such subjects as "A School Board Member's Idea of the Value of a Business Officials' Association"; "The Creative Side of Business Administration"; "Student Body Funds and Cafeteria Accounting"; "Financing School Building Programs"; "Professional Relations Between the Architect and the School Board"; "Building Features Affecting Insurance in Schools."



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News of the Month

University Is Proposed for Scottish Highlands

Inverness, the capital of the Scottish Highlands, has been chosen as the location for a university that will provide both cultural and technical education in the north of Scotland, says a recent announcement. An endowment fund of $10,000,000, with an immediate goal of $1,000,000, will be sought by the American Iona Society from persons on both sides of the Atlantic who are interested in the proposed university.

There are universities at Aberdeen, St. Andrew's, Edinburgh and Glasgow, the first three on the east coast, and the fourth in the middle south. The north and west are without a university, a need that will be supplied by the school at Inverness.

The primary purpose of the American Iona Society in building the university is "to enlist the cooperation of thoughtful Americans in giving practical recognition to Scotland for the wonderful contribution she has been making, century after century, to our national welfare," according to Richard M. Montgomery, president of the society. Dr. John H. Finley, of the *New York Times*, is vice-president.

Boston to Get Two New Intermediate Schools

The Boston School Committee will spend the $1,119,000 that was left unexpended at the beginning of the year for the construction of two new intermediate school buildings, a news release says. The decision was made on condition that the proposed new Central High School for Girls will be built next.

Progressive Association Initiates Two Significant Movements

The eleventh annual conference of the Progressive Education Association, held in Detroit, February 26 to 28, was notable for the largest attendance in its history, and for at least two significant forward steps.

Resolutions were passed for the organization of a world movement in education which will not only coordinate all educational agencies in this country to promote a knowledge of modern educational philosophy in all countries, but which will transfer to the teaching body the impetus and means of advancing better international understanding and good will which the politicians have signally failed to accomplish.

The other movement is to reorganize the entire relation of the secondary school to the college by doing away with the credit and unit system, liberalizing entrance examinations and establishing standards of secondary education which the colleges will accept as the basis for their curricula.

Officers elected for the forthcoming year are: president, Burton P. Fowler, head master, Tower Hill School, Wilmington, Del.; executive secretary, J. Milnor Dorey; treasurer, E. M. Sipple, head master, Park School, Baltimore.

Dr. W. G. Carr to Direct Division of Research for N. E. A.

Dr. W. G. Carr, assistant director of the division of research, National Education Association, will be director of the division of research, beginning June 1, according to the action of the executive committee of the association on March 23 at the national headquarters in Washington.

Doctor Carr succeeds Dr. John K. Norton whose resignation to accept a professorship on the faculty of Columbia University was recently accepted by the executive committee.

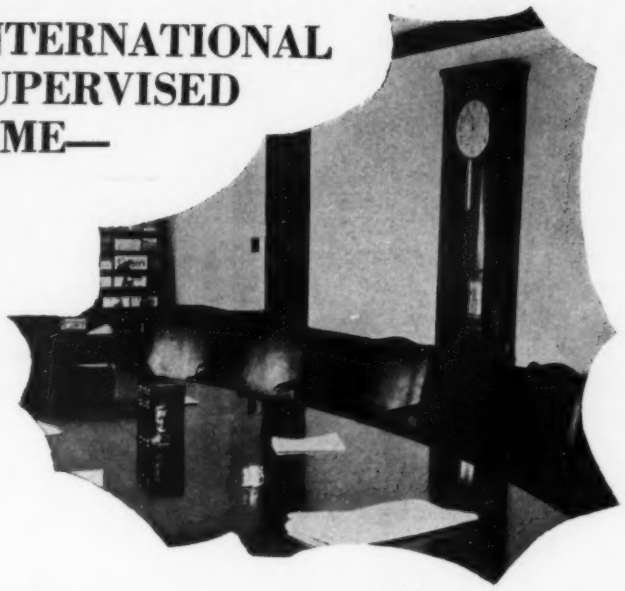
Cleveland May Eliminate Teachers' Cumulative Sick Leave

The Cleveland board of education has taken action to eliminate the teachers' cumulative sick leave, according to *Ohio Schools*. Such action is contemplated as an economy measure, the board estimating that a saving of $30,000 will result from the move.

The change will mean that sick leave with pay cannot exceed ten days in any year, even though no sick leave has been utilized in preceding years.

The Cleveland Teachers' Federation opposes the change.

INTERNATIONAL SUPERVISED TIME—



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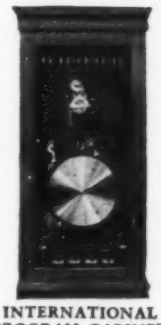
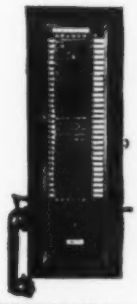


INTERNATIONAL PROGRAM CABINET



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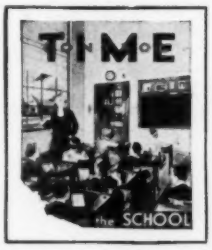

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News of the Month

School Officials Hold Second Annual Conference in Nashville

School superintendents, school board members, secretaries and other administrative officers from all over the United States attended the second annual conference for school administrators held at Peabody College for Teachers, Nashville, Tenn., March 30 to April 3. Nearly a thousand school officials attended this second conference.

The program included lectures and discussions by some of the most famous educators in this country. The discussions centered around such important problems as personnel and relationships; school housing; school finance; equipment and supplies; supervision.

A feature of the conference was an exhibit of school equipment and supplies by leading manufacturers.

Newark to Build High School Costing $1,080,000

The board of education, Newark, N. J., has completed plans to build a new high school costing $1,080,000 on a site that will cost $320,000.

The new school will have forty classrooms, accommodating thirty-five pupils each, ten classrooms for twenty-five pupils each, three gymnasiums, an auditorium seating 1,000 and special provisions for cooking, manual training and science courses.

Traveling Class in Architecture Is Announced

Emphasizing study of the latest trend in modern architecture as expressed in England, Italy, Spain, France, Germany and Holland, a traveling class is announced for this summer by the University of Southern California, to be in charge of A. C. Weatherhead, dean of the Trojan School of Architecture. Recent work in New York, on the Pacific coast and in other American cities and sections will be contrasted with European work.

Termed a "vagabond's tour" the transnational educational trip, available to men only, is limited to architects and students of architecture and the allied arts. Members of the party will be special guests of the Paris Beaux-Arts, the Fontainebleau summer school and of the American Academy in Rome. Lectures will be included, as six units of college credit will be granted to those who complete satisfactory requirements.

Interesting News for Teachers on Sabbatical Leave

Teachers who are going on sabbatical leave and who will spend the year abroad for study are advised that a course in Montessori methods will be given by Madam Montessori herself at the University of Rome, under the auspices of the Italian government, from January to June, 1931. Arrangements have been made to make attendance at this course profitable to teachers from foreign countries. Further information and application blanks for enrollment may be obtained by addressing the Royal Italian Consul General, 20 East Twenty-Second Street, New York City.

New Journal of Educational Research Is Published

The first issue of the first journal to attempt a systematic review of educational research has just appeared. It is called the *Review of Educational Research* and is the official organ of the American Educational Research Association, which is now a department of the National Education Association.

The first issue deals with the curriculum. It was prepared by a committee consisting of Dr. Henry Harap, Dr. William L. Connor and Dr. Ralph W. Tyler. This issue includes an extensive classified bibliography and treats of methods of curriculum making, studies of the objectives of the curriculum, studies of learning that bear upon the curriculum, and time allotment and grade placement. Four other issues dealing with teacher personnel, school organization, special methods up to the end of the elementary school and individual differences and psychological tests are scheduled to appear during the year. The whole field of research has been divided into fifteen topics which will be covered in three years.

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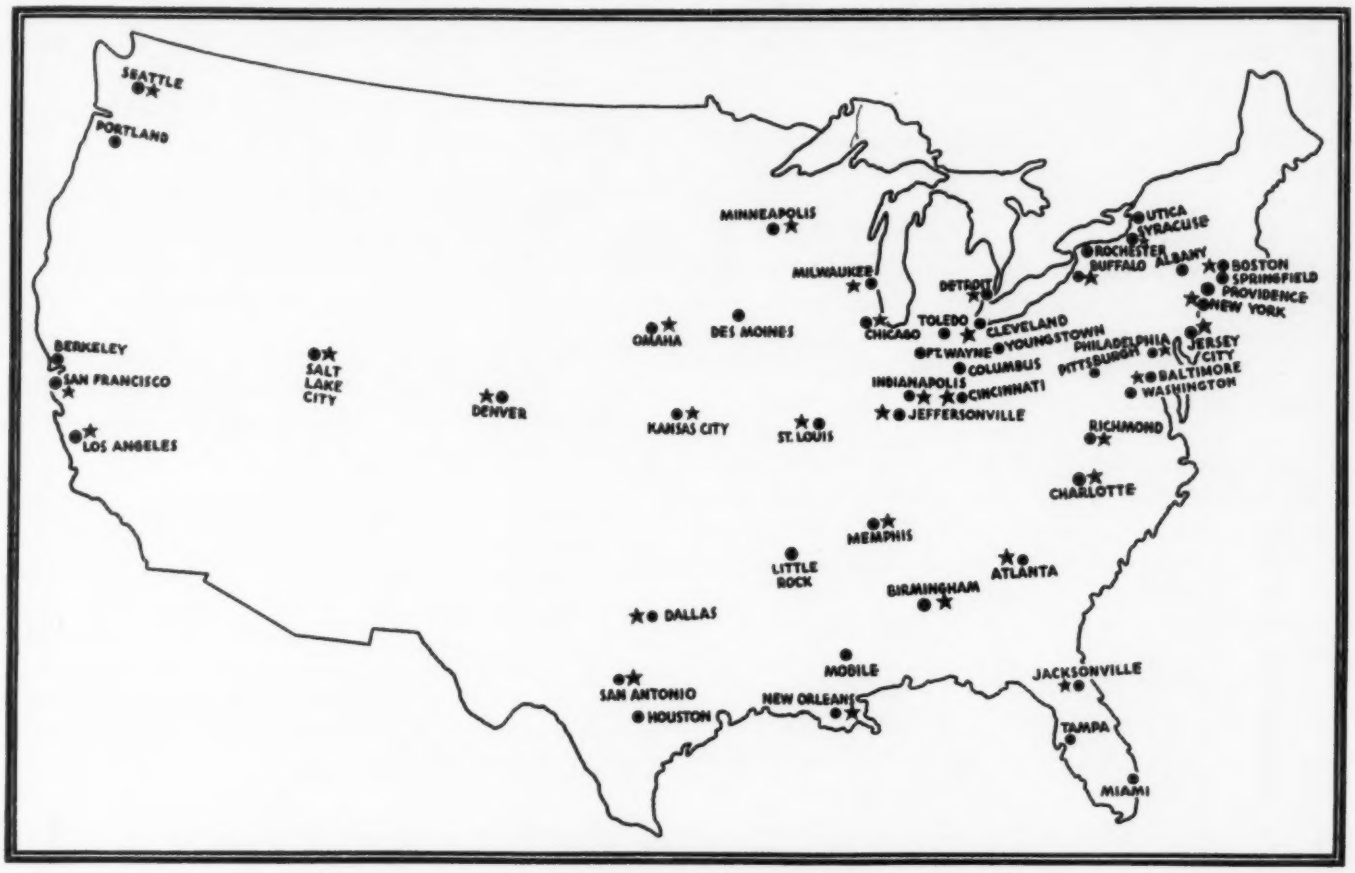

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In the Educational Field

THE REV. DR. JOEL BABCOCK HAYDEN, formerly minister of Fairmount Presbyterian Church, Cleveland, has been elected head master, Western Reserve Academy, Hudson, Ohio. DOCTOR HAYDEN who succeeds ARTHUR F. WARREN, former head master elect, will assume his new position in the fall of 1931.

WILLIAM EARLE STILWELL, founder and head master, University School, Cincinnati, died recently.

THE REV. BLAKE SMITH, twenty-eight-year old pastor of the Baptist Church, Mexico, Mo., has been chosen president of Hardin College of that city. Hardin includes a high school and junior college for girls.

ALICE VINTON WAITE, dean, Wellesley College, Wellesley, Mass., will retire at the end of the academic year and will be succeeded by DR. MARY LOWELL COOLIDGE, now assistant professor of philosophy, Vassar College, Poughkeepsie, N. Y. DOCTOR COOLIDGE is a graduate of Bryn Mawr, Bryn Mawr, Pa.

MARGARET ANN JONES is the newly appointed principal of the Brooklyn Industrial High School for Girls, Brooklyn, N. Y. MISS JONES is the youngest principal in Brooklyn.

NELSON SAUVAIN, former superintendent of schools, Devils Lake, N. D., has been made a member of the State Board of Administration of North Dakota.

W. E. LAMPSON is the new superintendent of schools at Scammon, Kan.

H. B. PIGMAN, superintendent of schools, Coshocton County, Ohio, and GEORGE H. CROW, extension professor, Ohio University, Athens, were killed recently when the automobile in which they were riding was struck by a train.

H. D. BYRNE, superintendent of schools, Portage County, Ohio, has been chosen president of the Ohio County Superintendents' Association. A. G. WELSHIMER, Urbana, has been elected vice-president.

H. CLAY, superintendent of schools, Buffalo, Iowa, has resigned.

PARKER T. PEARSON, Weymouth, Mass., has been appointed superintendent of schools, Arlington, Mass.

WILLIAM B. CURRY, head master, Oak Lane Country Day School, Philadelphia, since 1927, has resigned and will return to England at the close of the school year to become director of education, Dartington Hall, Totnes, Devonshire.

HENRY G. GILLAND has been elected to succeed MITCHELL GRATWICK as head master, Nichols School, Buffalo, N. Y. He has been for seven years head of the French department of the school.

GILBERT H. FALL has been appointed head master, Chestnut Hill Academy, Philadelphia. He has been on the staff of the school as master and registrar since 1906.

DR. JAMES M. EDSALL, district superintendent of schools, Brooklyn, N. Y., died recently. He had been a district superintendent in Brooklyn for more than thirty years.

ALEXANDER M. SULLIVAN, business manager, Boston Public Schools, has been borrowed by Fall River, Mass., to help solve the financial problems that are confronting that city.

WILLIAM HANFORD HERSHMAN, pioneer Indiana educator, died recently at the age of seventy-nine years.

LEROY WEBSTER has been named superintendent of schools, Pilger, Neb. He was formerly a principal in the schools of West Point, Neb.

FRANCIS NEEDHAM, Clinton, Mass., has been appointed principal, Huntington School, Bridgeport, Conn.

DR. ROZELL BERRYMAN has retired as principal, Gwynn's Falls Junior High School, Baltimore. He is seventy years old.

LOU MESSINGER, for twenty years superintendent, second supervisory district, Saratoga County, N. Y., will retire on August 1.

FRANK M. MARKHAM, supervising principal, Cobleskill High School, Cobleskill, N. Y., has resigned after twelve years of service there. He is now completing his thirty-ninth year of teaching. CLYDE W. SLOCUM succeeds him.

1 DESK . . . that serves the modern classroom in 6 *important* ways

THE amazing advantages of the "American" All-Purpose Universal Desk have won the enthusiastic approval of Superintendents, Principals, Trustees of schools everywhere. For beyond its stamina, its sensible, practical, durable construction . . . are features of such obvious merit that with its introduction at the N. E. A. Department of Superintendence Meeting in Detroit, it became of paramount importance as an example of modern equipment for progressive, modern schools.

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(Indicate here whether you are Superintendent, Principal or Teacher)

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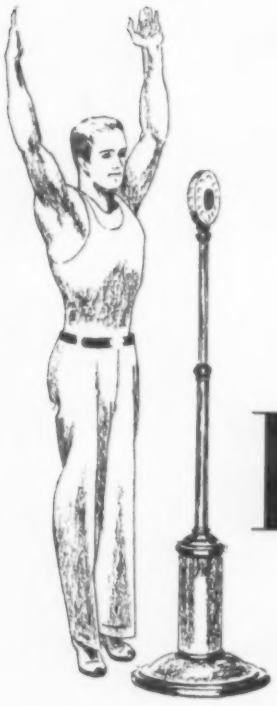
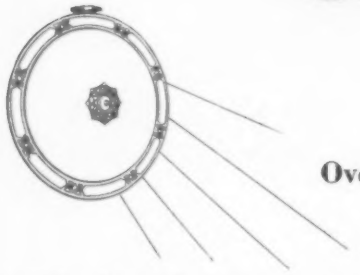


He puts every class on its toes...



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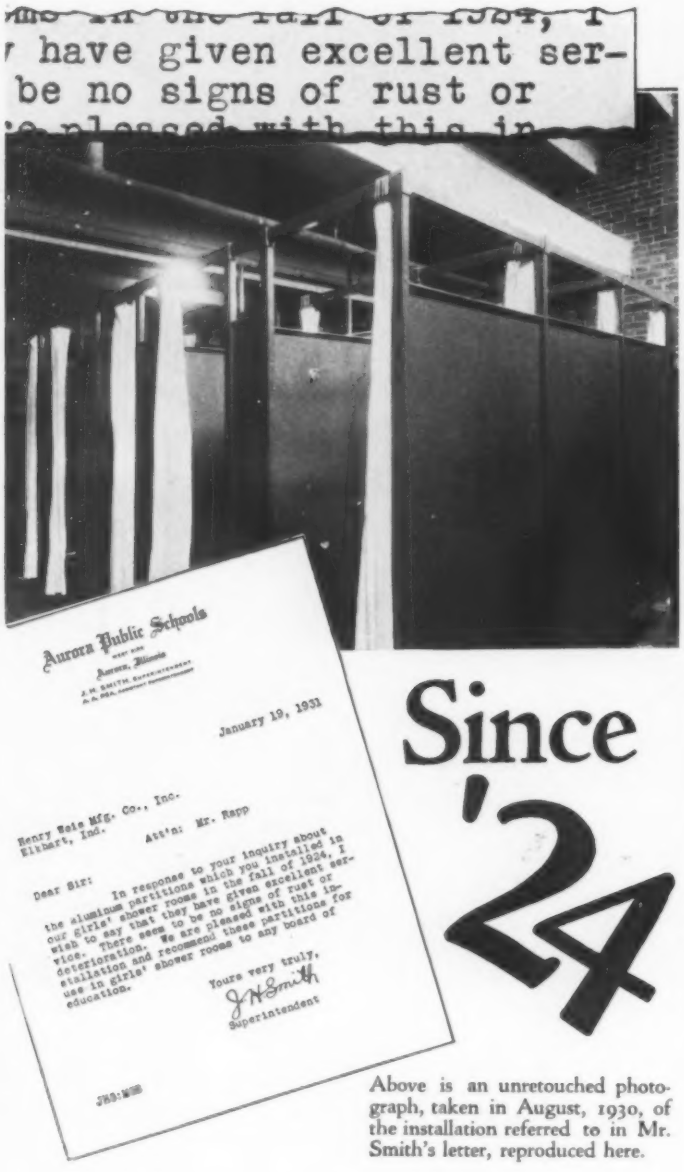
have given excellent ser-
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January 19, 1931
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Above is an unretouched photograph, taken in August, 1930, of the installation referred to in Mr. Smith's letter, reproduced here.

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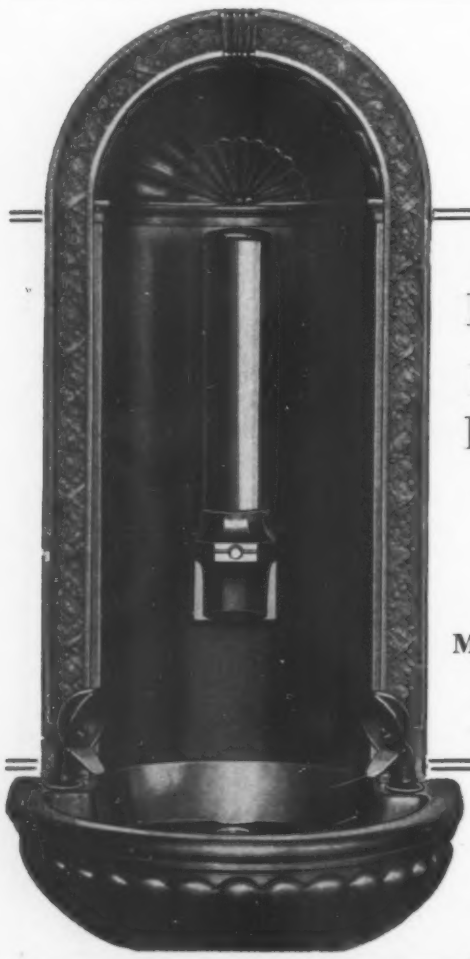

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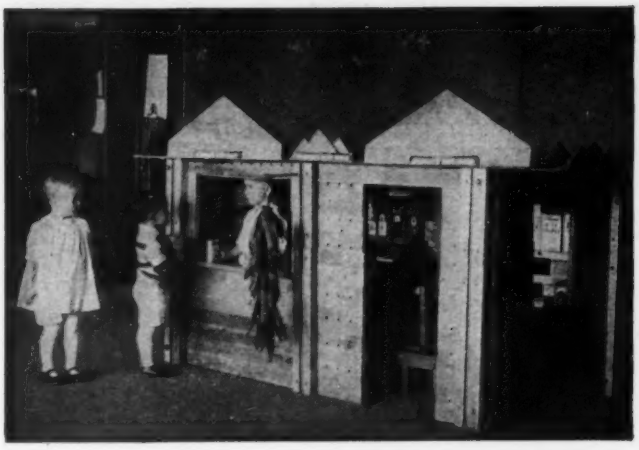

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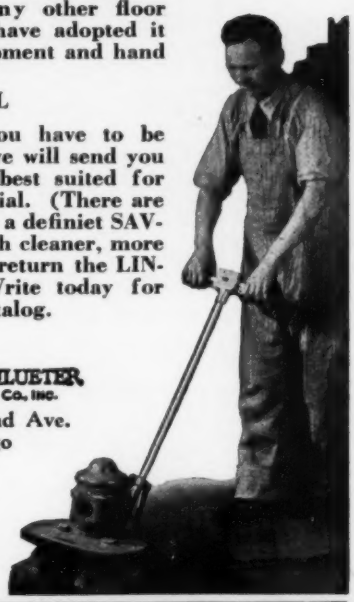

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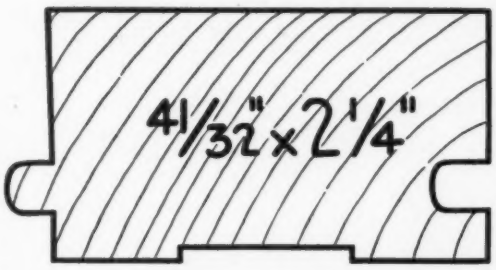

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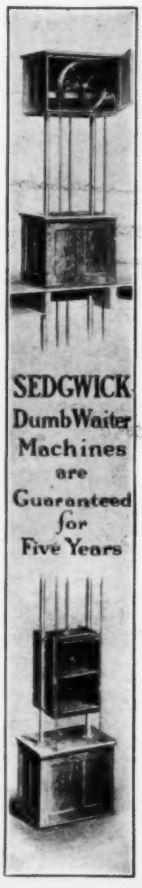

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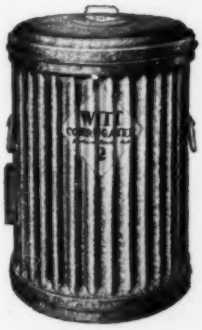

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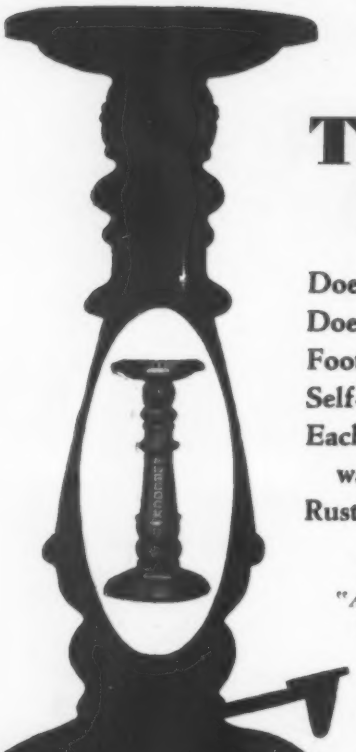

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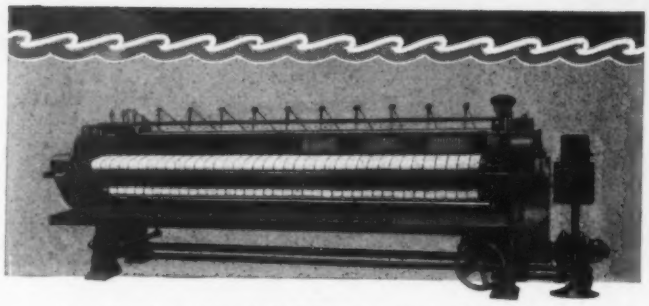

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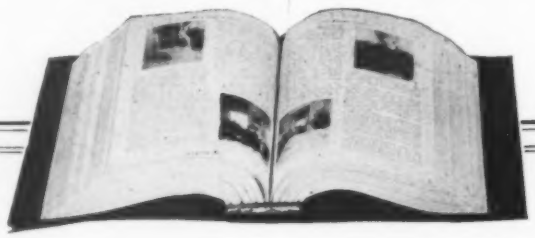

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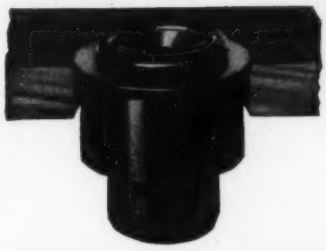

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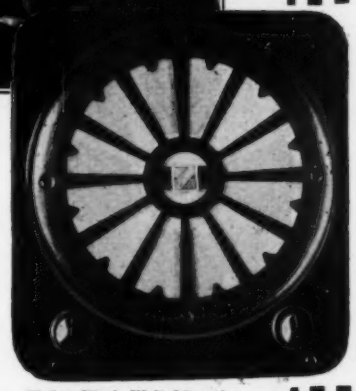

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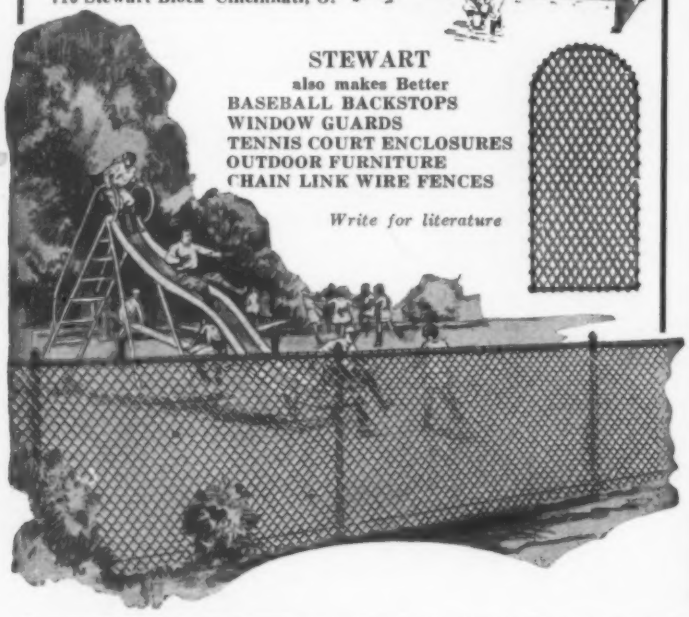

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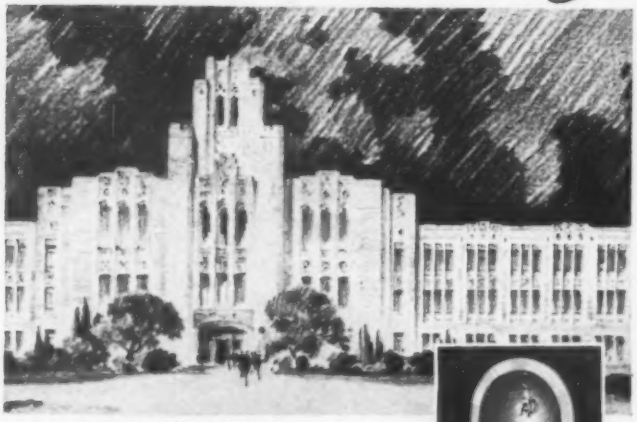
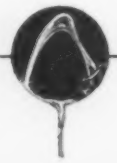


High School Bldg., Whitefish Bay, Wis.
Herbert W. Tullgren, Arch.

No. 631, recess wall types, were installed in this school. No. 605, regular wall types, were also specified.

One naturally expects Halsey Taylor fountains in a school building so distinguished. They meet your natural preference for artistic excellence in design, and, moreover, meet the also utilitarian aspect you must ever keep in mind. Two types—both with the usual Halsey Taylor patented features of practical automatic stream control and two-stream projector—help to safeguard the children against the dangers of contamination so often prevalent in ordinary obsolete types. The Halsey W. Taylor Co., Warren, O. *(See Sweet's—16 pages)*

HALSEY TAYLOR
Drinking Fountains



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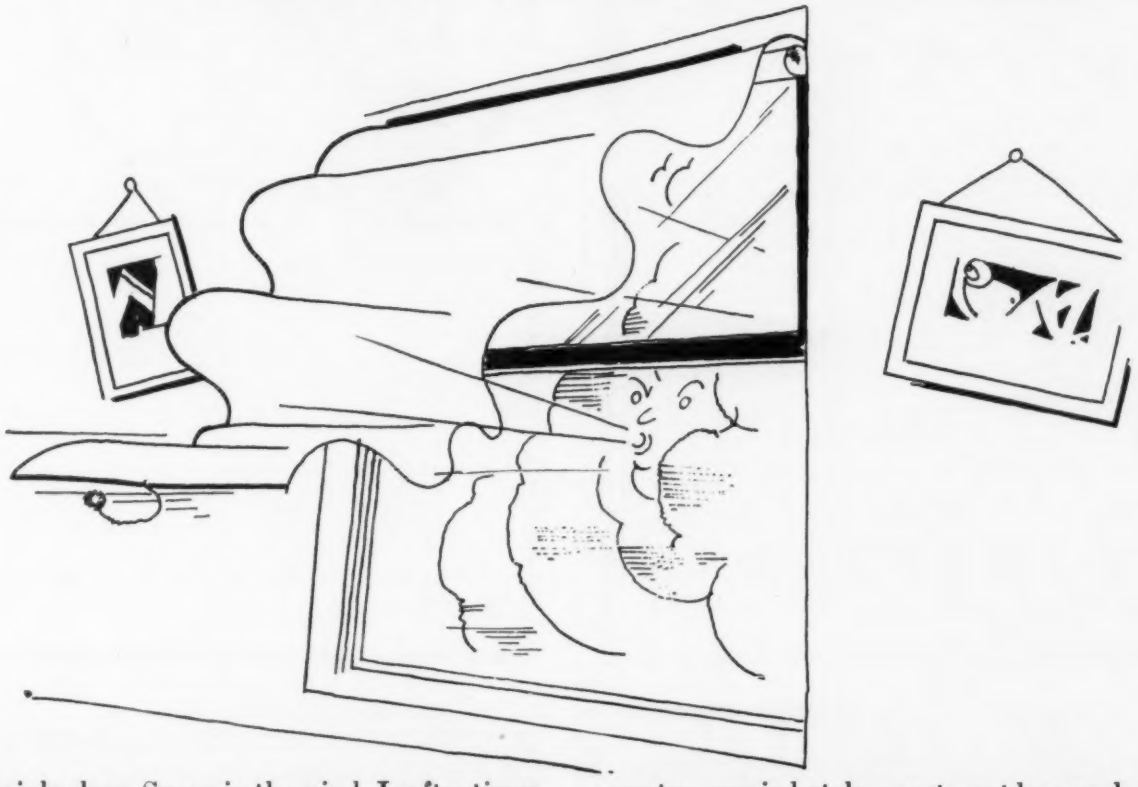

IT certainly does. Snaps in the wind. Is oftentimes exposed to beating rain. Collects dust and dirt. Rolls up, rolls down—thousands of times. Takes a good strong window shade to stand the gaff.

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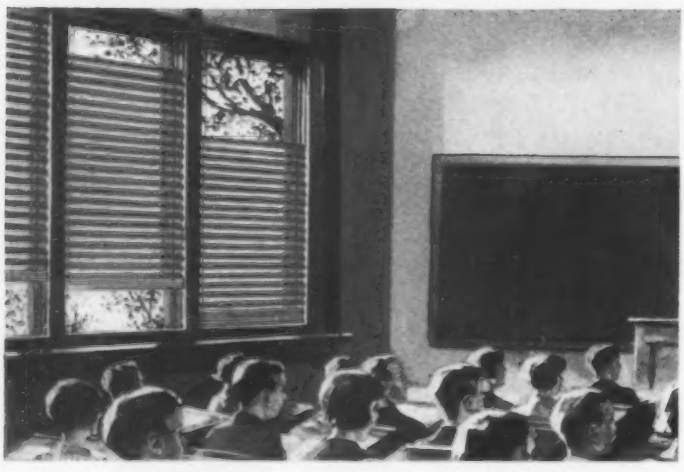

It is only human nature for young pupils or even college students to glance out of the window at the slightest provocation. ATHEY SHADES keep the student's attention IN the classroom, for they are instantly adjustable to shade the lower half or any part of the window and at the same time give the proper light and ventilation.

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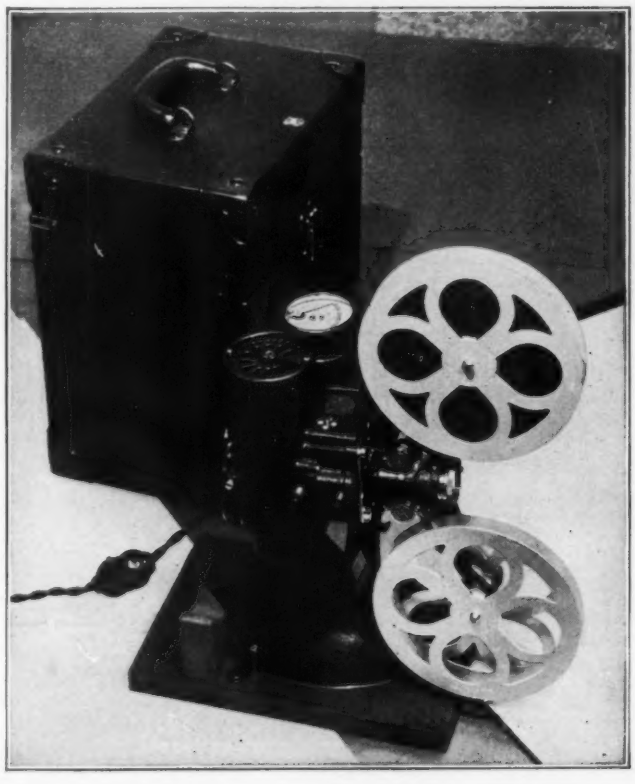

Because it does so extend the use of motion pictures in the school, the new 375-watt light, employed only in the Filmo Projector, has been welcomed as the most important advance in visual education since the advent of 16 mm. film. With this new Filmo Projector a famous vocational school shows 16 mm. films satisfactorily every day to an auditorium audience of 2,200. This is proof positive that Filmo 57-GG solves completely the problem of the larger auditorium showing. The same powerful illumination is invaluable in class rooms which cannot be effectively darkened.

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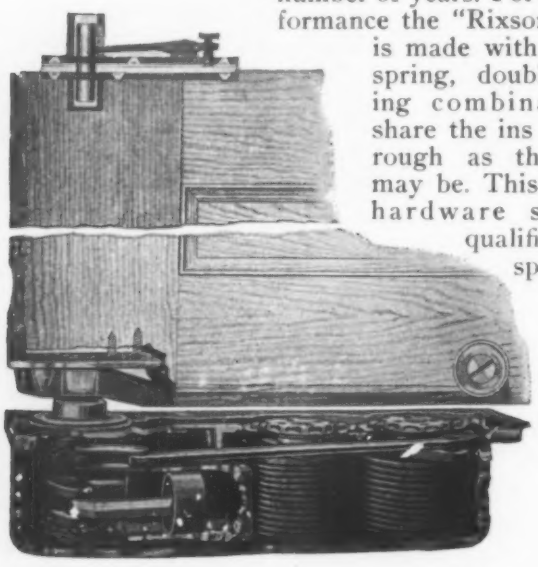

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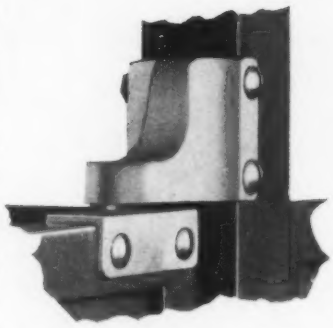

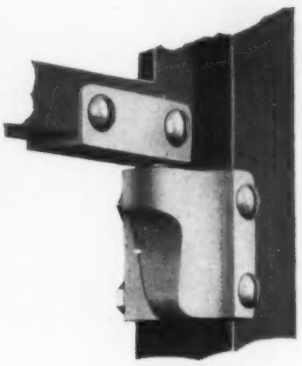

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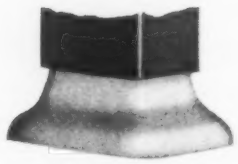

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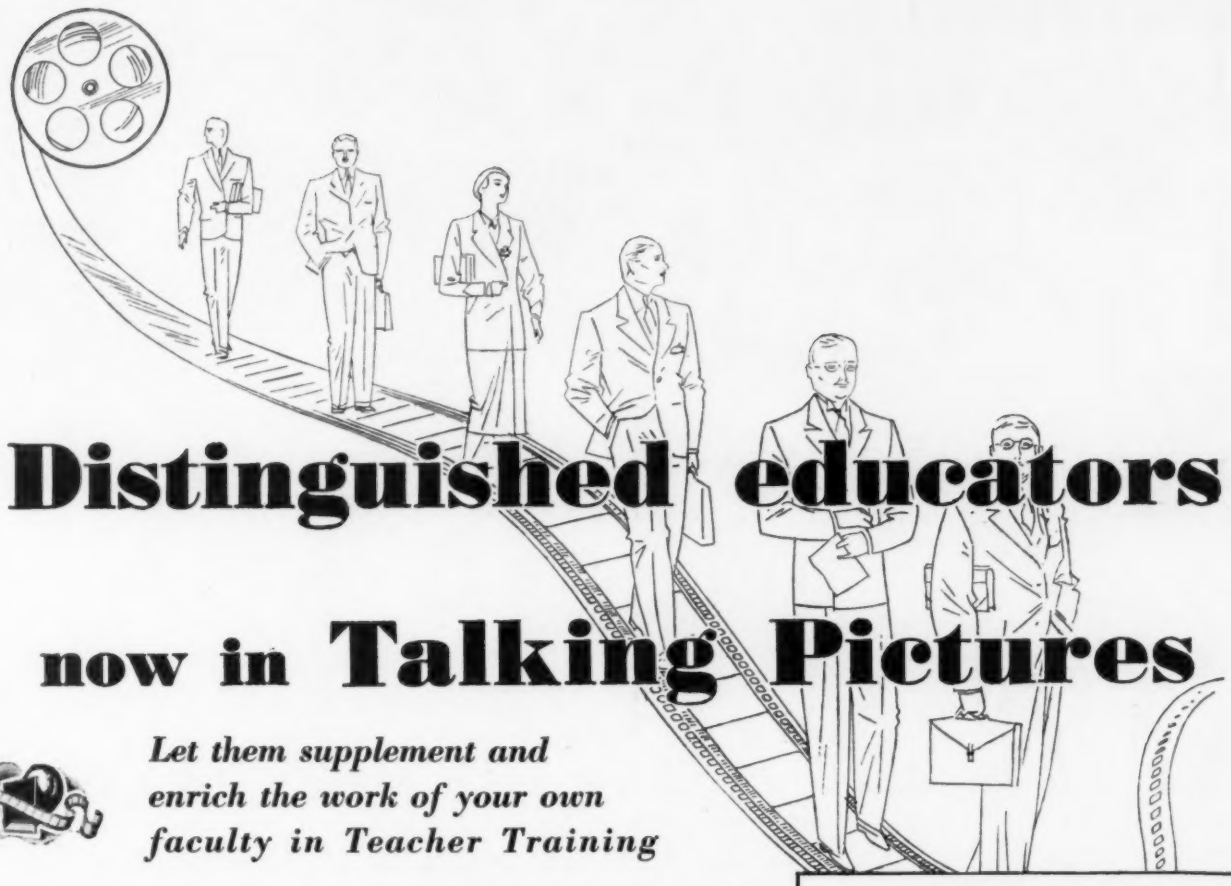

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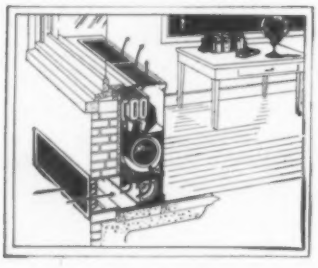
At Roll Call

— — — how many seats are empty?



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But there are degrees of cleanliness. Some methods stir up the dust—others fail to collect it—and still other methods are too slow and expensive.

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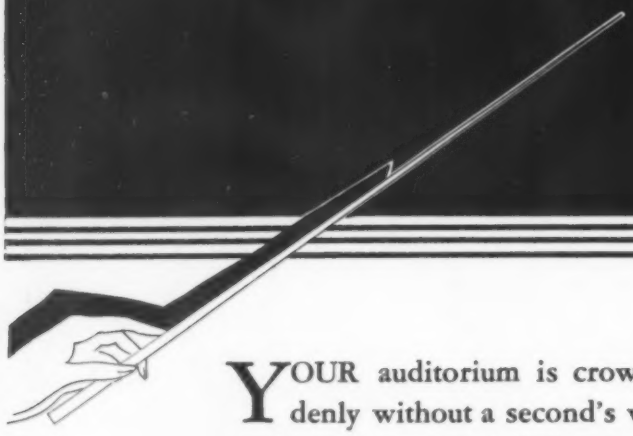
Do you know the three-word answer?

What's the difference between { possible danger and certain safety ?



YOUR auditorium is crowded. Suddenly without a second's warning it is plunged into total darkness. Even exit lights are useless. Current failure at such a time can result in inconvenience, confusion, or more serious consequences. "How can this be prevented?"

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THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia
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THERE OUGHT TO BE A LAW!

Editor
"Daily Microbe"

Things have come to a pretty pass when some of our most prominent citizens can be turned out of their homes, kit and kaboodle, without any notice whatsoever. My nephew, who has lived in the DeWitt High School for 15 years, tells me that when the School Board specified and laid Linoleum made by those Sloane people, there was great loss of life attending the microbe evacuation of the building. Have we no rights? Can't pressure be brought to bear on School Boards to prohibit the use of linoleum? Really, there ought to be a law!

(signed) PRO BONO MICROBO

There is very little the microbe world can do to stem the tide of events! True, it's tough on the little disease-spreaders when modern-minded School Boards specify W. & J. Sloane Linoleum and cover up all the cracks and crevices that make such ideal hiding places for these unwelcome scholars. The worst part of it is that W. & J. Sloane Linoleum is double-waxed at the plant, removing the last vestige of hope that might remain were any other linoleum specified.

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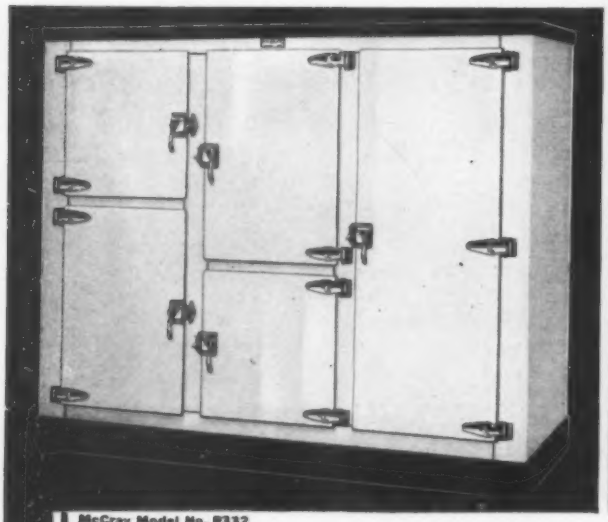
McCray's 41 Years Experience Means ECONOMICAL OPERATION



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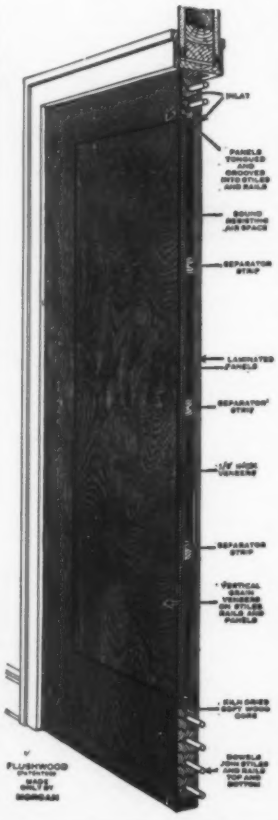
Let us send you complete information about Flushwood. We feel sure it will solve your door problem just as it has for hundreds of other school builders the nation over. A card to our nearest office will bring a prompt reply.



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Wilmington

NATURE'S FOODS IN NATURE'S WAY

MAKE PROPERLY BALANCED LUNCHEONS

THIS combination of split banana, grapefruit sections, lettuce, nuts and cherries, topped with whipped cream dressing, makes a fruit salad tempting to sight and taste—an economical "buy"—nutritious enough to form the main part of a well-balanced meal.

Food value . . . 450 calories. Protein 7.4 gms., fat 24.1 gms., carbohydrate 49.1 gms., with ample mineral and vitamin values.

TWO excellent school lunches are shown on this page. In each case the analysis conforms to the requirement of a growing child's diet. That is, each combination contains twice as much fat, and somewhat more than five times as much carbohydrate as protein, with abundant minerals and vitamins.

Whether salad or tray is chosen, the meal is completely satisfying, owing to the pleasantly "filling" quality of a mellow, ripe banana. Each is an ideal example of the better foods doctrine, "More protective foods: milk, leafy vegetables and fresh fruits."

We shall be pleased to send you, on request, a recipe book, "The New Banana," giving food values, marketing news, menus and directions for using bananas in many ways. Full page illustrations show unusual banana dishes, including salads.

A banana-and-milk tray, with a sandwich of buttered whole wheat bread and crisp lettuce, makes a wise luncheon choice for drowsy spring scholars.

Food value . . . 650 calories. Protein 15.4 gms., fat 28.3 gms., carbohydrate 78.7 gms., with abundant minerals and vitamins.

SEND COUPON FOR RECIPES

UNITED FRUIT COMPANY (N.S. 4-31)
Educational Department
1 Federal Street, Boston, Mass.

Please send free copy of illustrated recipe book, "The New Banana."

Name.....

Position.....

Address.....

City..... State.....

Von Duprin

Self-Releasing Fire and Panic Exit Latches

Cutting Maintenance Costs

As we have the opportunity to observe a constantly growing number of the new series Type "B" Von Duprin devices in operation, we are increasingly impressed with the fact that here are devices which are so well made that they will give service for many years at negligible cost.

Although we knew, when these devices were first marketed, that they were the best we had ever made, we have been agreeably surprised at the trouble-free service they render on doors which are in almost constant use.

When you ask your architect to specify genuine Type "B" Von Duprin devices, you serve your own best interests, for you save money in the end and trouble in the meantime.

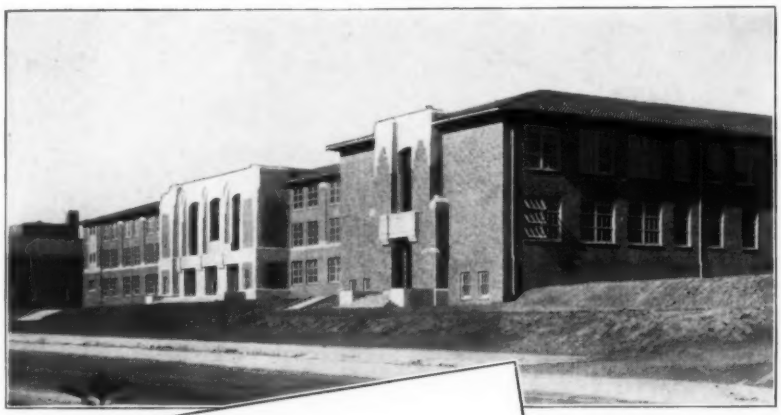
To be certain of having these superlatively good devices installed, we suggest that you have them specified separately from the finishing hardware and, of course, by name. Thus you foster clean, fair competition, since all reputable dealers can buy Von Duprin devices at the same fair prices.

VONNEGUT HARDWARE CO.
Indianapolis, Ind.

Listed as Standard by Underwriters' Laboratories

COLT AUTOSAN

DISHWASHING MACHINES



installed in the

New

HERBERT HOOVER HIGH SCHOOL

Glendale, California

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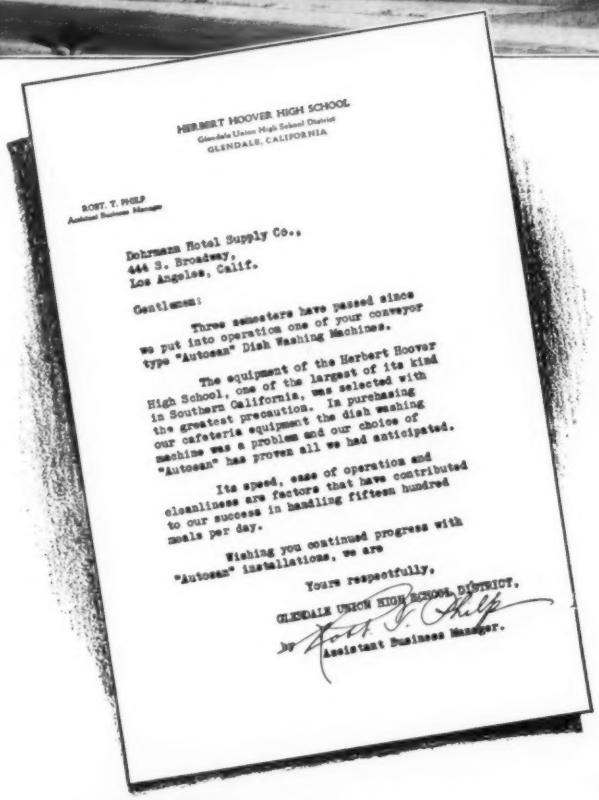


HERBERT HOOVER HIGH SCHOOL
Glendale Union High School District
GLENDALE, CALIFORNIA

BOYT. T. PHILP
Assistant Business Manager

Dohrmann Hotel Supply Co.,
444 S. Broadway,
Los Angeles, Calif.

Gentlemen:

Three semesters have passed since we put into operation one of your conveyor type "Autosan" Dish Washing Machines.

The equipment of the Herbert Hoover High School, one of the largest of its kind in Southern California, was selected with the greatest precaution. In purchasing our cafeteria equipment the dish washing machine was a problem and our choice of "Autosan" has proven all we had anticipated.

Its speed, ease of operation and cleanliness are factors that have contributed to our success in handling fifteen hundred meals per day.

Wishing you continued progress with "Autosan" installations, we are

Yours respectfully,

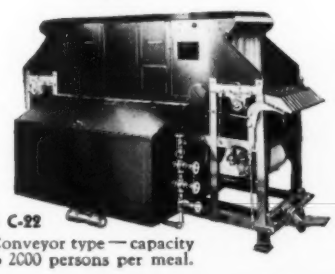
GLENDALE UNION HIGH SCHOOL DISTRICT,
by Boyt T. Philp
Assistant Business Manager.

A COLT AUTOSAN Model C-22, installed in the cafeteria of the Herbert Hoover High School, successfully solves the dishwashing problem that goes with the serving of 1500 meals a day to its students.

Letters such as the one shown here testify to the complete and efficient service rendered by Colt Autosan Dishwashing Machines in public institutions where cleanliness and sanitation are of paramount importance.

Powerful direct action sprays of hot water wash and rinse dishes, glasses and silverware, removing every last trace of food and grease—leaving them spotlessly clean.

Simplicity of operation, speed of handling and years of hard everyday service are some of the things you can expect in a Colt Autosan. Colt Autosan Dishwashing Machines have solved many school dishwashing problems. Why not yours?



Model C-22
Link Conveyor type — capacity 1200 to 2000 persons per meal.

Three rack type models are included in the Colt Autosan line. Model S-1 is especially adapted for school cafeteria service. Low in cost . . . economical in operation . . . with a capacity of 200 persons per meal.

Colt's Patent Fire Arms Mfg. Co. M
Autosan Machine Division
Hartford, Conn.

Please send me your new folder entitled, "Cutting Dishwashing Costs." We feed.....persons per meal.

Name .....

Address .....

City..... State.....

64-80

A COLT PRODUCT

COLT'S PATENT FIRE ARMS MFG. CO.
AUTOSAN MACHINE DIVISION
HARTFORD, CONN., U.S.A.

MAKERS OF FIRE ARMS, ELECTRICAL EQUIPMENT, MOULDED PLASTIC PRODUCTS, DISHWASHING AND METAL-CLEANING MACHINES.

Serving schools with economy
School-children with sanitation

Expedio closets equipped with Crane water controlled foot operated flush valves serve the interests of both school boards and school children with unusual fidelity. Their most important features are summed up in the five following points.

1 *Health protection*—No possibility of infection, as the hands are free from contact with the fixture.

2 *Convenience*—Convenient to operate; step on the button and the flush is accomplished.

3 *Accessibility*—Not necessary to tear out floor if valve leaks, as the flush valve is concealed in a utility corridor.

4 *Maintenance*—Main valve is in a utility corridor and is easily accessible for adjustment. Auxiliary valve and connections are located in a water-tight cast iron box built into the floor and can be removed or replaced without disturbing floor.

5 *Sanitation*—Exposed parts are reduced to a minimum as push button is the only exposed part.

C 10285 - A Crane Expedio closet with water controlled foot operated flushing valve.

In the complete Crane line of school plumbing and heating are many materials which incorporate new improvements in sanitation and introduce worth while economies. Visit the Crane Exhibit Rooms and post yourself on them; or write Crane Co. for full information.

Valves CRANE *Fittings*

CRANE CO., GENERAL OFFICES: 836 SO. MICHIGAN AVE., CHICAGO
NEW YORK OFFICES: 23 W. 44TH STREET
Branches and Sales Offices in Two Hundred Cities